THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society. Issued Monthly

VOLUME 2 NUMBER 1 } Whole No. 115 PROVIDENCE, R. I., JANUARY, 1918 PER YEAR $2.00 SINGLE COPY 25 CENTS

CONTENTS

ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I., UNDER ACT OF MARCH 3, 1879

THE RHODE ISLAND MEDICAL JOURNAL

The Official Organ of the Rhode Island Medical Society

Issued Monthly under the direction of the Publication Committee

VOLUME 2 NUMBER 1 } Whole No. 115 PROVIDENCE, R. I., JANUARY, 1918 PER YEAR $2.00 SINGLE COPY, 25 CENTS

ORIGINAL ARTICLES

SOME FACTORS IN THE DIAGNOSIS OF CARDIAC CONDITIONS.*

By William H. Smith, M. D.,
Boston, Mass.

It is my belief, based upon a fairly large clinical experience, that exaggerated importance has been attached to cardiac murmurs in the diagnosis of cardiac disease. I am sure this is true with apical systolic murmurs. I believe the distinction should be made at once between apical systolic murmurs before forty, and after forty. At the latter age they may mean early myocardial degeneration. Presystolic or diastolic murmurs favor organic disease. In the absence of murmurs serious organic lesions have been overlooked. Had the evidence for or against cardiac disease been obtained the real diagnosis, independent of the presence or absence of murmurs, would have appeared. Just consider for a moment what a variety of heart conditions, clinically, are associated with murmurs:

Malformations of the heart.
Malpositions.
Open foramen ovale.
Acute or chronic valvular defects.
Calcified deposits upon the valves.
Atheroma of the arch.
Syphilis of the arch.
Fibrinous and adhesive pericarditis.
Pleuro-pericarditis.
Hypertrophy of the ventricle with relative mitral leakage.
Dilatation of the ventricle.
Anaemic murmurs.
Cardio-respiratory murmurs.
Relative incompetence from high pressure.

In contrast to the above causes of murmurs I would call your attention to the following clinical facts: With extreme heart weakness no murmur may be heard; in angina pectoris there may be no heart enlargement, no murmurs, and a low blood pressure; in mitral disease the murmurs at the time of examination may be absent, or heard only in some unaccustomed place, as in the left lateral position, or only after exercise; systolic basal murmurs—the earliest manifestation of arterio-sclerosis—may sometimes be heard only with the patient on the back, with the breath held in deflation; the diastolic murmur of aortic regurgitation at times appears not at the base but at the apex—upon placing its origin depends the diagnosis—while the diastolic murmur of syphilitic aortitis with regurgitation is so low pitched, in the early stage, as to require frequent and repeated examinations to determine its presence. Suspicion of its existence from the known etiology, leads to this search. This point is worthy of emphasis. *Suspicion of some cardiac condition,* based on other factors than murmurs, will often times lead to the discovery of murmurs.

The question of the interpretation of murmurs has become acute because so many men with apical systolic murmurs have been rejected in the draft. I have had the opportunity to examine a certain number of these; in none have I been able to discover evidence of organic disease. The size of the heart was normal by accurate X-ray measurements; the cardiogram tracings have been normal. One striking feature in all of the cases was the low position of the heart—the ptotic heart. So difficult is it to discover the important murmur—so many times the murmur is absent at examination—that I believe it is time to emphasize other factors in the diagnosis of heart conditions. Relegate most murmurs, at least the apical systolic ones, to an inferior position in diagnosis, not a superior one.

Cardiac disease arises, in the main, through (1) infections which damage the endocardium, the pericardium, or the myorcardium. Syphilis, while more selective, may affect the first part of the aorta with secondary valve retraction. (2) Degenerative changes of unknown or toxic origin by damaging vessels, especially the coronary arteries, produce weakened heart muscle. In general, it may be said heart disease arises

*Read before the Providence Medical Association, December 3, 1917

either from infections or degeneration. Of the infectious causes of heart disease in the young, chorea, rheumatic fever, and tonsillitis are pre-eminent. Anyone of these makes probable organic mitral or aortic disease, with or without pericarditis, acute or chronic, with or without acute or chronic glomerulo nephritis. Pure aortic regurgitation, in early adult life, presupposes a syphilitic aortitis with or without aneurysm, possibly with early tabes. Myocardial infection from syphilis undoubtedly occurs—it is less easy to recognize clinically. Arterio-sclerosis produces its chief cardiac damage by lessening the blood supply through narrowed coronaries—hence a myocardial weakness. High pressure, from whatever cause, may be associated with heart symptoms. These symptoms, in my experience, depend upon the integrity of the coronary circulation, and the ability, therefore, of the heart to hypertrophy. Given high pressure (200 systolic) in the young adult, from chronic glomerulo nephritis and there may be no heart symptoms, even in the presence of heart enlargement to two or three times the normal, until weakened by the terminal uraemia or anaemia, the heart muscle dilates. Clinically these cases, waterlogged, resemble mitral regurgitation with failure of compensation. Usually the aortic second plus will make the diagnosis clear. On the other hand cardiac symptoms may appear early in other pressure cases, when coronary circulation is impaired and heart muscle nourishment interfered with. In other words, before you have heart disease you must have had a cause for heart disease. Search out the cause—infectious, syphilitic, nephritic or degenerative. Practically all organic mitral disease is infectious. Aortic disease may be infectious, probably is if combined with organic mitral. If pure, it is probably syphilitic. Degenerative changes are suggested by weakened heart muscle, anginal attacks, increasing blood pressure. Roughly speaking, before the age of twenty exclude infections. After twenty, look out for the nephritic heart and for early syphilis. At forty, or thereabouts, syphilis is common in its heart manifestations. After forty, syphilis and early arterio-sclerosis should be considered. Given good blood supply to the heart one would expect, if damage to the heart, vessels or kidneys threw extra work on the heart, there would be increase in its size. To determine whether the heart is or is not enlarged I believe one of the most important factors in the diagnosis of heart disease. This determination is not always easy when the enlargement has been chiefly left ventricular. It enlarges backward, and escapes recognition by the usual method of percussion. If left ventricular hypertrophy is suggested by the history or symptomatology, turn the patient on the left side and percuss the left ventricle, now near the chest wall, and palpate in the fifth, sixth or seventh interspace for pulsation, noting the force. If heaving and felt in the sixth, undoubted ventricular hypertrophy is present. Do not be misled by the low position of the ptotic heart. Your percussion area as usually obtained may show a heart of normal size. Palpation and percussion in the left lateral position may show considerable left ventricle enlargement. One is wrong, the other is right, and the diagnosis and further study of the heart proceed from this observation.

I was led to adopt this left lateral percussion by comparing the size of the heart as ordinarily estimated by percussion with the real size at autopsy. To have normal percussion limits and a heart enlarged to two or three times the normal size at post mortem, led me to investigate, and I discovered the mistake occurred only where the enlargement was chiefly left ventricular, in which case posterior position of the enlarged left ventricle prevented its recognition by anterior percussion.

If X-ray plates and cardiogram tracings were possible in all patients many unrecognized cardiac cases would be discovered, based upon this failure to recognize left ventricular hypertrophy by ordinary percussion. Right sided hypertrophy is usually easily recognized by percussion, as is left sided hypertrophy when associated with dilatation. It is the recognition of left ventricle hypertrophy before the ventricle dilates that is important. To find out the cause as early as possible, whether nephritis, syphilis, or arterio-sclerosis, makes diagnosis more accurate and treatment more effective. I would rather have the left border percussion line with the patient in the left lateral position than any other in a patient over forty. The two next in importance are the cardio-hepatic angle, and the width of sub-sternal dulness. The width of sub-sternal dulness at the second and third ribs usually is between 5 and 6 cm. In high pressure, arterio-sclerosis, especially in syphilitic aortitis, this dulness may reach 7 or 8 cm. Glands may mis-

lead; occasionally the dilated left auricle in mitral stenosis is encountered in this percussion.

I would again emphasize these two points—(1) Ascertain an etiology for the suspected heart lesion. Frequent tonsillar attacks or rheumatic fever make valvular damage a probability. I would study most carefully any apical systolic murmur in a patient with a chronic tonsillar history, especially if the tonsils were hypertrophied or merely clipped, not excised. (2) Estimate the size of the heart, thereby judging whether any increased work had been forced upon it by the suspected damage. With no enlargement the lesion is either recent or of slight extent. This applies to valve conditions essentially.

A lesion of any moment will usually manifest itself either by dyspnoea on exertion, pain on exertion, palpitation, pounding or irregular heart action. Many of these symptoms, or all of them, may occur in the individual case. To attach importance to a systolic apical murmur with no known etiology obtained for organic valve condition, with no demonstrable heart enlargement by accurate percussion, checked up by X-ray heart measurements seem to me to attach too much value to one bit of evidence and neglect other and more important facts.

I seldom examine any patient where a systolic murmur is not heard, after exertion, with the patient in the left lateral position. This often is loud and of wide transmission. It is probably due to relative mitral leakage, not organic. If these systolic murmurs are so easy to call forth by exercise, and change of position, and arise from so many causes they must have a varying degree of importance. At present this importance is in direct ratio to the experience of the examiner. When a systolic murmur is heard at the apex the next statement made is "transmitted or not transmitted to the axilla." Organic murmurs are, as a rule, more widely transmitted in mitral cases toward the left axilla. It is true, clinically, they are more often of recognized pitch, or have a musical quality or rough character, rather than a mere whiff or souffle. But, since mitral regurgitation is usually associated with some degree of mitral stenosis, usually other facts to support the organic character of the supposed mitral lesion may be obtained, as, for example, a sharp first sound, a reduplicated first sound, a presystolic or a diastolic murmur. It may require exercise or change of position to obtain this evidence of mitral stenosis, but once obtained the real value of the systolic apical murmur appears, and a definite diagnosis of mitral disease, organic, may be made. Usually the right ventricle or left auricle will show enlargement if the lesion is extensive. Usually the pulmonic second will be accentuated.

To approach the value of murmurs from still another angle may be of interest. Given an etiology for cardiac damage—take syphilis, for example—without knowing what murmurs syphilis may produce, you would overlook the earliest cases of syphilitic aortitis—the most important to recognize. A systolic murmur at the base of the heart in a man of forty years, who had syphilis at twenty or twenty-five, may be the earliest and only sign of aortitis. If by percussion or X-ray you find a beginning arch dilatation, or obtain a history of angina showing coronary involvement in the process, or are fortunate enough to find the diastolic murmur showing beginning value retraction, your diagnosis is made at once—due, first, to the syphilitic history; second, to the systolic murmur. Without these facts or knowledge of syphilitic aortitis this patient might have been assured that no serious condition was present, so frequent are basal systolic murmurs. Or, again, given syphilis in the history, unless especial care was taken to eliminate early aortitis by most prolonged search for the systolic basal murmur, the real lesion would be overlooked and the heart pronounced sound. Here, again, I am emphasizing the value of etiology and a knowledge of pathology, which makes hunting for murmurs of known importance essential. These murmurs are of importance because they have a reason for their existence; they occur in the proper place, after the proper interval after infection—they have a right there from etiology and pathology.

Besides etiology and cardiac enlargement, a third and very important fact in the diagnosis of heart conditions is the limitation or nonlimitation of the field of cardiac response. What symptoms has the patient had pointing to a weak heart? Dyspnoea on exertion is the most striking and constant one. Pain on exertion is perhaps the most important one. Sensations such as those produced by extra systoles are misleading and require tracings for their proper interpretation.

Oftentimes a careful history will show that for years, especially in chronic valve infections, there has been less and less ability to work, walk

or sleep except on higher pillows, without symptoms of cardiac discomfort. This fact of the progressive character of the limitation points at once to increasing mechanical valve defects or weakening heart muscle. Contrast this with the sudden onset, after some unusual exertion, of cardiac pain or dyspnoea in a man of forty-five robust and rugged, as he thought, up to the moment of his discomfort. Recognizing the possible syphilitic cause in this case at once leads to the inquiry of the time of infection—it will usually antedate the cardiac symptoms by twelve to fifteen years. Cardiac symptoms usually precede death by two years. Not to recognize late syphilitic aortitis is bad enough; not to recognize early aortitis is worse. How important it is to recognize by history alone slight limitations of activity, from dyspnoea or mild angina, the earliest symptoms of the early stage of the senile heart, before hypertrophy has been obtained. The entire plan of treatment aims to favor hypertrophy by limitation of exertion and use of digitalis. Nothing may be found on examination to point directly to the heart, but after you have seen these cases over a series of years, you learn what will happen if the recognition of the condition is postponed.

You may examine a patient and find no heart enlargement, no increase of pressure, no murmurs, and pronounce the heart sound. Death may occur in twenty-four hours from cardiac disease—serious—easily recognized at the time of examination. Had you asked yourself the question: Is this patient of the infectious age, the syphilitic age, or the degenerative age? and questioned accordingly you would undoubtedly have found two factors—(1) cardiac pain on exertion; (2) limitation of the field of cardiac response. Either of these two would have enabled you to make the diagnosis: angina pectoris, arterio-sclerosis, with beginning senile heart. The earliest sign of serious cardiac mischief in this type of cases may be obtainable only through the history. Angina may be the first symptom before you get any enlargement, or even the relative mitral of a weakening myocardium. Recently upon the almost forgotten history of pain on exertion six years before, in a man fifty-five or six years of age, I made the diagnosis of angina. There was no enlargement; blood pressure 130 systolic, 100 diastolic; a seven foot X-ray plate showed no abnormality; the cardiogram tracing was pronounced normal by an expert; and yet within two weeks after the examination I had opportunity to see the occluded left coronary, the occluding right coronary, with fibrosis of the myocardium—the patient dying in an attack of angina. Six years ago the diagnosis should have been made—the end result is not capable of treatment.

It has not been my purpose to touch upon arythmia, tachycardia, fibrillation, flutter, block or those especial technical cardiac conditions. I could not if I would—they must be left in the hands of a trained expert. The diagnosis of many cardiac conditions is impossible without cardiogram or polygraph tracings. But when I see such simple methods as a search for a cause, sound cardiac size estimation, and the estimation of the field of cardiac response neglected, and over-emphasis placed, by the average physician, upon murmurs, I cannot but feel that something is wrong. I have disregarded hundreds of apical systolic murmurs after study of the case—there was no cause for them in the history; there was no evidence from cardiac size that they increased the work of the heart; there was no effect upon the activity of the patient by their presence. In my experience they occur in nervous people with low pressure, oftentimes with ptotic hearts.

MEASLES.

D. L. Richardson, M. D.,
Providence, R. I.

Synonyms: Morbilli, Rubeola. French: Rougeole. German: Masern. In this country "measles" is the name most widely used and is by far the best. If a scientific name is used, "morbilli," the Latin name for the disease, is to be preferred since the term "rubeola" may be easily confused with "rubella," the proper name of the disease poorly called "German measles." Furthermore, the term "rubeolé" is the French name for rubella. "German measles" is a name that should be dropped.

It is stated by medical historians that measles had its origin in the countries bordering on the Red Sea, about the tenth century, A. D. The first accurate description of the disease was made by Rhazes, a distinguished Arabian physician. While knowing little or nothing about the history of medicine, I venture to say that measles, as well as all infectious diseases, had

their origin at a much earlier period of the history of man. In the earliest times, to be sure, they may have been very limited in distribution because of lack of social or commercial intercourse. Undoubtedly, however, measles appeared as an epidemic in the tenth century and fell under the eyes of a keen observer who was able to set it aside as a new disease—not an altogether new disease, for all the Arabian physicians believed it to be a variety of smallpox, bilious smallpox, it was called by Avicenna. It was not until Sydenham studied an epidemic from 1670 to 1674 that the symptoms were fully described and the disease determined as an infectious entity and not a manifestation of smallpox. Up to Sydenham's day, and even later, measles and scarlet fever were considered the same disease, and again he made a valuable contribution to medicine by accurately describing scarlet fever, to which little has been added to the present day.

Measles is to be found in all parts of the world. Age, sex, season, or race will not protect against this, the most highly transmissible of all the infectious diseases, the one which very few human beings escape. It would seem that the first three or six months of life are singularly free from attack, altho the disease may possibly be contracted *in utero*. Children between one and ten years of age are most commonly attacked. This is explained by the highly transmissible character of the disease and the universal susceptibility to it. It is usually contracted at the first exposure. Adults are as susceptible as children, provided they are not protected by a previous attack. Panum states that in the Faroe Islands, in 1846, not one person who had escaped in the epidemic of 1791 escaped the disease. The interval between these epidemics was over fifty years. Geographical position cutting off human travel may keep communities free from the disease for long periods of time.

Etiology and Epidemiology.

The exact cause of measles remains still unknown. A bacillus has been recovered by Pielicke, Carron, and Barbier. A similar short, slender bacillus has been found in the blood by Borini, who was able to produce with it, in small animals, a disease resembling measles. Lesage has described a micrococcus which he succeeded in isolating from the blood and nasal mucus and with which he claimed to produce in rabbits a disease resembling measles. But none of the above work has been corroborated.

Something quite definite has been learned about the body fluids which contain the measles virus and how long these fluids are infectious. The most recent work has been done by Goldberger and Anderson of the United States Public Health Service, and Hektoen of Chicago. It is interesting to know that Horne of Edinburgh, in 1758, claimed to have inoculated twelve children with blood from measles lesions which was rubbed into excoriated surfaces. He failed to inoculate children intra-nasally with nasal secretions. In 1822, Speranza successfully inoculated measles; about 1854, Bufalini reported successful inoculations of his own and of three other Italian investigators. In 1842, Katona inoculated 1,122 individuals with blood plus the contents of miliary vesicles, and claimed ninety-eight per cent. of this number developed measles. He states that fever developed at the end of seven days. Mayr successfully inoculated measles, in 1848, by placing nasal mucus in the noses of two children. The period of incubation was eight or nine days. He was unsuccessful when using blood.

In all the above inoculations, the resulting disease was mild in character. Many of the results have been much questioned, in the past, as other observers were unsuccessful. Viewed, however, in the light of recent investigations, it would seem that at least part of the results mentioned above can be relied upon. During 1911, Goldberger and Anderson made a great contribution to our knowledge of the virus of measles by utilizing monkeys, which are susceptible both naturally and artificially to the disease. Since then Hektoen and Eggers of Chicago, Nicolle and Conseil of Paris, Lucas, and Prizer, have successfully inoculated monkeys.

In experimental cases, about fifty per cent. of the animals show definite symptoms. The period of incubation is not less than five days, but it is variable. A rise in temperature is constant. Some cases show catarrhal symptoms, while others do not. This is true of the eruption. Inoculation protects against a second successful inoculation. The measles virus was carried through six monkey generations. Finding that they were susceptible to inoculation experiments, they exposed animals to other animals who were suffering from the disease and transmitted it in this way. In this connection, they mention an

instance reported by Chavigny in which a monkey caught the disease from its keeper, with whom it had been in close contact. They have shown that the nasal and buccal secretions contain the virus, but the scales of desquamation do not. They have shown that the blood loses its infectivity, thirty-six to forty-eight hours after the appearance of the eruption. The secretions collected during the first forty-eight hours after the appearance of the eruption contained the virus, and the infectivity of these secretions was much diminished or lost with the approach of convalescence. The virus will mostly pass through a Berkefeldt and is, therefore, a filterable virus. It resisted dessication for twenty-five and one-half hours; is killed by heat of 55.° C. exposed for fifteen minutes; resists freezing for twenty-five hours, and retained infectivity after twenty-four hours at 15.° C.

Measles is the most highly transmissible of all the infectious diseases. There is almost universal susceptibility. Exceeding few persons who live to middle age escape it. Of the number who escape, some undoubtedly suffered from it in some unrecognizable form. It would be strange if all cases of measles developed the rash upon which we largely depend for diagnosis. If it always conformed to the text-book picture, measles would differ from all other infectious diseases. In a large family, there may be one or more members who apparently escape the disease in its usual form who have some transient catarrhal symptoms which are undoubtedly due to measles. I have seen two or three cases of measles without a rash.

The disease is endemic in large cities, taking an epidemic form every two or three years. Smaller communities may be entirely free from it for several years until introduced by some case from outside the town. During this period of freedom there have grown up a considerable number of susceptible children and the disease continues until few escape. The classic example, which I have already referred to, is the Faroe Islands, which were free from the disease from 1781 to 1846. It was then introduced by a cabinet-maker, who contracted it in Copenhagen. Six thousand people out of a population of 7,782 took measles before it had spent its force. Every old adult who had not had the disease in 1781 contracted it in 1846.

The infective agent of measles probably does not live long outside the human body. Most observers agree on this point. From the work of Goldberger and Anderson, it would appear to live longer than commonly supposed. However, the danger of a physician or other exposed person carrying it to others in a community is very slight indeed; but under hospital conditions or in institutions into which measles has been introduced, infection by nurses, physicians, and others who pass between the sick and the well, is certainly carried on the hands, and so forth, unless rigid precautions are taken. The French and English hospital statistics bear this out. Kerr of Edinburgh believes that he has seen it carried by nurses. At the Providence City Hospital, I am convinced that it has been carried by nurses, by physicians, or by both.

This leads up to the mooted question of air or droplet infection. The English authorities, with varying degrees of certainty, believe that droplet infection does occur, Kerr of Edinburgh and Rundle of Liverpool dissenting. Our own experience has been as follows: Since the opening of the hospital up to the end of 1912, we have treated 207 cases of measles in our isolation wards. In 1910, from 59 cases treated in these wards, only one case developed. 1911, from 26 cases, 11 cases developed. These eleven developed between October 30 and December 12, and from a single case which was admitted during the incubation period. It will be noted that for one and one-half years previous to the date October 30, only one cross infection developed. During 1912, from 121 cases, 12 cases developed; these were during the early part of the year and followed on the heels of the previous outbreak. No case developed after March 15. A careful study of the circumstances leads me to a strong belief that air dissemination played little or no part. It was noted that a patient in the opposite end of the ward was as likely to be the first to develop the disease as the patient across the hall. We have to deal with two possibilities: either someone has been careless in technic, or else the virus is hard to remove from the hands when in a very fresh state. I am convinced that measles is a contact disease, for the above reasons.

The period of infectivity is pretty definite. The latter part of the incubation period is undoubtedly infectious, reaching its height during the latter part of the pre-eruptive and the first

part of the eruptive stage, and ceases not far from four days after the beginning of the rash. The Health Department of New York city quarantines measles for only six days after the beginning of the eruption.

The period of incubation of measles is more definite than for almost any other infectious disease, small pox only approaching it. From nine to ten days are required from the exposure to the first symptoms, and thirteen to fourteen days from such exposure to the appearance of the rash. In animal experiments, this period is shorter, just as it is in such experiments with all other infectious diseases because the virus is usually introduced directly into the blood.

Fever and slight indisposition are the very first symptoms of measles, the catarrhal symptoms coming on later and being of varying intensity and length. I have some twenty-four charts of cases of measles which have contracted the disease in the hospital and on whom bi-daily temperatures were being taken for the respective diseases from which they were suffering at the time the new infection took place. It is to be noted that temperature was usually the first sign of the disease except in a few instances when a rise in pulse preceded any temperature. In one instance a rise in pulse was the only sign of the disease until the day of the rash, when the temperature rose. In a few instances the rise in pulse, which is never out of proportion to the rise in temperature, did not follow for a day or two after the development of temperature.

The average length of the prodromal period was four and one-third days. It was five days in ten cases; four days in nine cases; three days in four cases; and two days in one case. It will be noted that the rash usually appeared on the fourth or fifth days of the diseases.

In general three types of temperatures were observed. The most frequent is that given by the text-books, and appears in twelve of the twenty-four cases: namely, a fall within 24 to 36 hours after onset of rash, this remission lasting usually about 24-36 hours and again rising to the fastigium. The fastigium usually coincided with the height of the rash. It may precede the height of the rash, but rarely follows this point.

The fastigial temperatures were as follows:

107.0	1 case
105.0	1 "
104.8	1 "
104.0	9 "
103.8	2 "
103.6	1 "
103.0	5 "
102.6	1 "
101.0	3 "

These temperatures were rectal, with four possible exceptions. Another point which I wish to emphasize is the early drop of temperature after the appearance of the rash. To look at the chart, it is seen that the major portion of the illness precedes the eruption and this pre-eruptive period, during which the disease is not usually recognized, is, unfortunately, the time when it is most infectious. I do not wish to be understood to say that temperature is necessarily the very first symptom, but I believe that it is the first to be elicited from children who are not able to express a slight feeling of malaise. From the histories of adult cases, the incubation period is not always free from slight symptoms. Such an example may be a 22-year-old girl who complained of epigastral pain and vertigo eleven days before the appearance of the rash.

The intensity and duration of catarrhal symptoms preceding the eruption were rather variable. In a few cases, these symptoms were exceedingly slight, so that the rash was about the first thing noted.

There occurs rather constantly a leucocytosis beginning during the last two or three days of the incubation period and lasting out the period of invasion, usually falling to normal about the time of the development of the eruption. The leucocytosis is of the polymorphonuclear variety. This agrees fairly well with the experiments on monkeys conducted by Hektoen and Eggers, except that there is a relatively high lymphocyte count, which is true of the monkey in normal health.

I do not propose to discuss the general symptoms, course, complications, or sequelae of measles, but cannot close without calling to your attention unrealized facts about the mortality of the disease. Kerr of Edinburgh in a recent article publishes some mortality statistics for measles and other diseases in different countries from 1887 to 1908, viz.:

Death Rates per Million Living (1887-1908).

	United Kingdom	France	Prussia	Austria	Belgium	Holland	U.S.A.
Measles.....	354	810	260	382	457	258	101
Scarlatina....	135	171	275	511	158	31	104
Diphtheria....	199	864	750	788	315	127	87

It is evident from this table that nearly as many children die of measles as from diphtheria and many more than from scarlet fever. In Aberdeen, for nineteen years, the case fatality was 3.33 per cent. For the first year of life it was 13.9 per cent.; second year, 10.0 per cent.; third year, 3.4 per cent.; fourth year, 1.6 per cent.; and thereafter less than 1.0 per cent. This is in a city which has a good Health Department and where diseases are well reported. In many other communities, the case rate is much higher. In the report from which the above figures are taken Dr. Wilson says that within ten years (previous to 1904) measles had caused more deaths than any other zymotic disease and even more than all other zymotic diseases put together, excluding whooping cough.

Hospital mortality is considerably higher than the foregoing figures. In all the London fever hospitals for the past two years, it has been about 13 per cent. for all cases and ages. At times it reaches 25 per cent.

It is interesting to note that the total and the case fatality of measles and whooping cough is about the same.

LEAD POISONING, A CAUSE OF OBSCURE DISEASE.

By W. Louis Chapman, M. D.,
Providence, R. I.

It is the purpose of this brief communication to call the attention of the medical and dental professions to the probability of the greater frequency of chronic lead poisoning than we are accustomed to believe. It was in the study of obscure cases of gastro-intestinal disease that the writer had made examinations of the urine for lead and obtained a sufficient number of positive findings to cause him to believe that, with certain symptoms, no study of the case was complete without eliminating the possibility of lead as a causative factor. The usual classic symptoms of lead poisoning are well known. The lead line, wrist drop and colica pictonum, together with a history of occupational exposure, readily suggest lead, but the chronic form in which none of these symptoms occur, or at least occur in mild or obscure form, is probably very often overlooked. It is easy to diagnose diseased conditions when evinced by marked physical signs. It is not as easy when the signs are suggestive rather than positive or when they are seemingly subjective rather than objective. This is true of cardiac, gastric and in fact of almost any form of disease.

That it is of the greatest importance to diagnose disease in its incipience is also self-evident, as is also the fact that many symptoms considered as subjective, if observed for a time, are later shown to be caused by pathological conditions and would have been so considered had one's studies been sufficiently thorough. I believe this to be true of lead and that in the past a great many cases have been unrecognized because of failure to make the necessary tests in cases showing articular and muscular pains, malaise and asthenia, gingivytis with loss of teeth often without suppuration, indigestion and irregularity of the bowels and a considerable variety of objective and subjective gastro-intestinal symptoms. Then again a great many cases have escaped us because we did not think of the possibility of lead. This is not at all surprising because the state of our knowledge is such that we naturally think of lead toxemia as an occupational neurosis or disease and hardly one to be found among the nobility and the gentry. Again, the process of the examination of the urine for lead, which is the diagnostic proof, is somewhat complicated and decidedly expensive and one to which recourse would usually be had only in exceptional cases. From the brief experience of the writer, however, it will be seen that we must examine the urine for lead more frequently if we wish to cure our cases and relieve them of their troublesome symptoms.

No doubt every practitioner recalls cases which he did not help until potassium iodide was administered, and although signs of syphilis were not present, yet he felt that perhaps such a patient had syphilis and the iodide assisted in the cure. It is highly probable that such cases might have been due to lead, for in lead poisoning the relief afforded by eliminants is immediate and marked.

In the State Board of Health Journal of Rhode Island for January, 1917, Mr. Gage,

the state chemist, suggested the importance of examinations for lead, and it is due to the State Laboratory that such examinations may be made in cases where patients cannot afford a chemist's fee. My thanks are due the State Laboratory for the examination of the urine in several of my cases. Owing to the fact that K I increases the output of lead in the urine, it may be suggested that it should be given for a week before the sample is submitted, so that subsequent examinations need not be made. This is particularly important where there is but little lead in the system, and it must be noted that cases showing a trace or under .5 mg. may show a much larger amount after taking the iodide.

As yet it is not known how little lead may be ingested and show symptoms, or how much lead may be taken and not cause symptoms. Here as in other diseases the patient may show susceptibility or idiosyncrasy, or the delicacy of the perceptions may fortunately indicate poisoning where it would not show in a less finely organized nervous system. This is also true of malaria in the South, death having occurred without any particular complaint; the same thing has been noticed in cases of beri beri among the fishermen of Labrador.

It is possible that the stippling of the erythrocytes characteristic of lead poisoning may have been mistaken for malaria in some cases, and it is important to note that quinine, in the writer's opinion, is of value in cases of lead poisoning.

.5 mg. is to be considered the danger point of lead in the urine. Any person whose urine shows that amount or over should be observed and treated. How long a time is required to completely free and eliminate the metal is not known. Nor do we know just how long a person should stay under treatment.

With the enormous increase in the consumption of tinned foods there is an added danger, because of the acid nature of some of the contents. Trench warfare has contributed to our knowledge of lead disease from tinned foods and possibly because of some fermented liquors containing lead.

In the etiology of gingyvitis, recession of the gums and dental caries lead must be considered as a very important causative factor. On a number of occasions the writer has suggested the possibility of the syphilitic origin of cases of pyorrhea alveolaris where the disease was widespread and showed several fistulous openings in the alveolar process, for the reason that such cases were often markedly helped by K. I. He now urges the importance of a study for lead in such cases, and believes that his views as to their luetic origin must be modified and that systematic eliminative treatment will be followed by immediate and marked improvement in the dental condition. Cases 1 and 3 which follow illustrate this fact. I have under my care at the hospital at the present time a patient with marked lead gingyvitis with distinct line on the gums who has not worked in lead for nine years. The ipecac treatment of gingyval amebiasis is notoriously unsuccessful and it is quite probable that many of these cases are caused by lead.

We do not know very much about the pathological chemistry of lead in the body. The following important questions await solution:

a. What is the point of saturation of the tissues,—that at which lead is eliminated in the urine?

b. What amount of lead is necessary in the average individual to occasion symptoms?

c. At what time may the individual be declared free from lead?

f. What is the lethal dose in chronic poisoning, and how long and in what quantities will dilute and attenuated solutions of lead cause encephalitis, wrist drop and nerve disintegration?

Case 1. A physician consulted me for obscure gastro-intestinal symptoms. Had pains in various parts of the abdomen like colic. Bowels were irregular. He was tired and run down all the time and felt that something was holding him back. Could not seem to get up the speed he wished and did not know why. Had been rapidly losing his teeth from non-suppurative disease. Had a metallic taste in the mouth in the morning. Weak in the legs and rheumatic pains in the legs and wrists. Examination of the urine showed 2 mg. of lead per liter, and after a week's treatment with K. I., 20 grs. per day, the urine showed 5 mg. of lead per liter. The tap water showed 2.78 mg. lead per liter—more than the first examination of the urine showed. Continuing the use of K. I. and using spring water, showed an immediate and progressive improvement in this case. The abdominal pains gradually subsided, the legs more strong, the bowels

more regular; he did not tire as easily; the loose teeth became more firm and his dentist expressed amazement at the rapid and marked improvement in his gums.

Case 2. A woman 65 years old. Has had diabetes for many years, with mitral chronic endocarditis, general asthenia and nervousness. Feels dizzy most of the time and has been seen by a neurologist, who diagnoses her case as cerebral arteriosclerosis. She has occasional attacks of colonic stasis and twice has had to have manual removal of rectal scybalae. Occasionally her abdomen swells up and she has intermittent pains all over the abdomen. Of particular interest were sharp pains in both legs over the tibialis anticus and in the right wrist. There is considerable loss of power in both hands. Her urine showed 19 mg. of lead per liter and the tap water .3 mg. per liter. Her improvement under treatment was immediate and marked, and she was much pleased at the cessation of pain in her legs and wrists. She, too, has gingyvitis with complete denudation of her right lower central incisor exposing the apex.

Case 3. A woman 55. She is a chair invalid or rather spends her time on a couch. Has not walked for six years. Advanced rheumatoid arthritis. Her husband died at age of 57 after an illness of two weeks from nephritis. This patient has deeply congested gums, but very little pyorrhea. It has been suggested that her arthritis was caused by her teeth, but on account of her condition she could not visit a radiologist for a search for apical abscesses. Her urine showed 7.33 mg. of lead per liter.

Case 4. A woman of 79. She has acute mitral and aortic endocarditis with much dizziness and some dyspnea. Occasional pains over the appendix and gall bladder so severe as to require morphine by the mouth. The symptoms seemed to indicate appendicitis and cholecystitis with lithiasis, but hypodermics were not necessary at any time. Rest in bed, nitroglycerine and other drugs helped her, but it was not until K. I. was given as a chance prescription, a not unusual thing in practise, that she began to improve. Examination of the urine showed 12. mg. lead per liter.

Case 5. A woman of 46. Has had two operations for intestinal obstruction due to bands and adhesions. Her circulation is poor, she has occasional dyspnea, cold feet and chronic indigestion with occasional attacks of extreme constipation with much abdominal pain. It is quite a study of treatment and diet to keep her in a state of fair health. The urine shows 2.5 mg. lead, which undoubtedly accounts for some of her symptoms.

Case 6. A woman of 42. Has tachycardia with dyspnea. Heart is usually 120 to 136, with only rarely a soft systolic mitral murmur. X-ray of the chest shows a small heart with old peribronchial enlargement. She rarely has colds and has no signs whatever of an active tuberculosis. Her urine after a week's treatment with K. I. shows 2.5 mg. of lead, and eliminative treatment has reduced her heart to 80 and she has much better circulation than she has had for a long time.

In addition to these cases I have four others showing small amounts of lead, but as they have not had any eliminative treatment, the analysis is not a fair estimate of the amount of poisoning now going on.

These cases have all been assembled during the past 30 days and represent only my own practise and mostly patients that have consulted me for the relief of gastro-intestinal conditions. A practitioner with a very large practise told me recently that he had never had a case of lead poisoning to treat.

There is no doubt but that in some cases the lead poisoning had been going on for years. There are in this city hundreds and perhaps thousands of houses, both old and new, piped with lead, and it is to be believed that there are many persons going from one doctor to another seeking relief of symptoms caused by lead. I believe that the experience of other physicians will be the same as my own if this possible cause of disease is borne in mind and the urine examined for lead in all obscure cases of this type.

Conclusions.

1. Chronic lead poisoning is undoubtedly very common in this city.

2. It is the cause of many cases of obscure and atypical gartre-enterological and neurological disturbances which are difficult of diagnosis and resistant to treatment. It causes many symptoms before gross pathology is apparent. The lead line appears later.

3. A promising field for study and research

is opened whereby our present incomplete knowledge may be enriched.

4. The pathological chemistry of the blood and tissues is as yet entirely unexplored and we do not know what effect chronic poisoning may have upon cellular pathology and the etiology of new growths.

5. We seek information as to tolerance, selective affinity, susceptibility, treatment, idiosyncrasy and symptomatic diagnosis.

6. It may be that in plumbism we have an important etiological factor as yet unappreciated in gout, the arthritides, occupational neuroses and gastro-enterological manifestations without gross pathology as revealed by our present methods of investigation.

7. Chronic plumbism is probably a widespread cause of dental disease causing interstitial and suppurative gingivytis, recession, focal necroses and premature loss of teeth.

8. Potassium iodide and quinine have a helpful effect in these cases as eliminants and antidotes.

9. The examination of the urine for lead is as yet our chief means of diagnosis in this class of cases.

CLINICAL DEPARTMENT

CRISIS OF PNEUMONIA WITH A LONG DROP IN TEMPERATURE.

By Charles E. Hawkes, M. D.,
Providence, R. I.

The following case is interesting on account of the extraordinary drop of 9.2° F. in the patient's temperature at the time of her pneumonic crisis.

Mrs. R., a young married woman, had been successfully confined about two weeks before I attended her. January 13, 1917, her physician, who was ill at the time, asked me to respond to a telephone call that he had received from her. She had been feeling well up to the previous afternoon, when she began to have headache, backache, weakness and lameness all over. Now she had a loose-sounding cough, with a temperature of 103.5° and pulse of 144. Her abdomen and pelvis were negative and lochia had practically ceased. On examination, her chest disclosed no adventitious signs. She was apparently suffering from an attack of the "grippe." Next day she seemed better; temperature was 101.6° and pulse 126. Her cough was still loose and she was expectorating. She had slept well and bowels had moved satisfactorily.

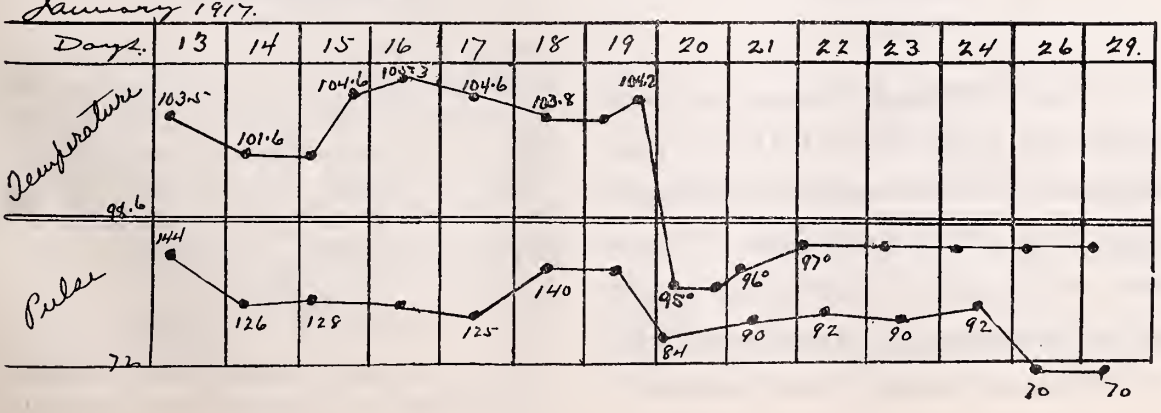
On January 15 she looked a little cyanotic, although her pulse felt fairly strong, at 128 per minute, and no heart murmurs were developing. Temperature remained 101.6°. Her chest condition was the same. Later in the day she felt decidedly chilly and sick, and a nurse was summoned to care for her.

The following day I learned that her temperature had shot up to 104.6° after her slight chill the day before, but had fallen some in the morning. Her color was now normal. A pneumonic spot was developing in her right axilla. Her cough and expectoration remained as before. A dose of castor oil had produced an excellent result. In the evening her temperature rose to 105.3° and later fell to 104.5° after an alcohol bath. The baby had been discontinued at the breast. A second nurse was in attendance at night.

During the evening and night of January 19 her temperature reached 104.2° and pulse 140. She had a tremendous sweat and slept scarcely any.

On the morning of January 20 her temperature had fallen to 95°. It was recorded by both nurses and two different thermometers. Her pulse was 84 and of good quality. Her color showed no cyanosis. She breathed easily and had very little cough, or pain in her lung. Examination of the latter disclosed dry pleuritic friction rubs, near her right breast, and moist rales throughout the upper right lobe.

Her temperature continued 95° for nearly twenty-four hours, and rose to 96° the next day. January 22 it was 97°, where it remained for a week, until I discontinued my visits. Her pulse stayed about 90° until January 26, when it fell to 70°, where it remained. The rest of her convalescence was uneventful.



THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society

Issued Monthly under the direction of the Publication Committee

Editorial Correspondence, Books for Review and Exchanges should be addressed to the Editor; Advertising Correspondence to the Business Manager.

Advertising matter must be received by the 15th of the month preceding date of issue.

Advertising rates furnished upon application, to the business manager, J. F. Hawkins, M.D., 114 Westminster Street, Providence, R. I.

SUBSCRIPTION PRICE, $2.00 PER ANNUM. SINGLE COPIES, 25 CENTS.
Entered at Providence, R. I. Post Office as Second-class Matter.

RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

JOHN CHAMPLIN	*President*	Westerly
GARDNER T. SWARTS	*1st Vice-President*	Providence
JOHN M. PETERS	*2d Vice-President*	Providence
JAMES W. LEECH	*Secretary*	Providence
W. A. RISK	*Treasurer*	Providence

DISTRICT SOCIETIES

KENT
Meets the second Thursday in each month

C. L. PHILLIPS	*President*	East Greenwich
L. J. A. LEGRIS	*Secretary*	Phenix

NEWPORT
Meets the third Thursday in each month

H. J. KNAPP	*President*	Newport
M. E. BALDWIN	*Secretary*	Newport

PAWTUCKET
Meets the third Thursday in each month excepting July and August

CHARLES H. HOLT	*President*	Pawtucket
EARL J. MATHEWSON	*Secretary*	Pawtucket

PROVIDENCE
Meets the first Monday in each month excepting July, August and September

FRANK E. BURDICK	*President*	Providence
CHARLES O. COOKE	*Secretary*	Providence

WASHINGTON
Meets the second Thursday in January, April, July and October

F. C. PAGAN	*President*	Westerly
W. A. HILLARD	*Secretary*	Westerly

WOONSOCKET
Meets the second Thursday in each month excepting July and August

W. W. BROWNE	*President*	Woonsocket
E. F. HAMLIN	*Secretary*	Slatersville

Section on Surgery—2d Wednesday in each month, Dr. F. G. Phillips, Chairman Dr. Peter P. Chase, Secretary and Treasurer.

Section on Diseases of Children—3d Tuesday in each month, Dr. Henry E. Utter, Chairman; Dr. J. S. Kelley, Secretary and Treasurer.

Section on Gynecology and Obstetrics—3d Wednesday in each month, Dr. C. W. Higgins, Chairman; Dr. E. S. Brackett, Secretary and Treasurer.

Section on Medicine—4th Tuesday in each month, Dr. D. Frank Gray, Chairman; Dr. C. W. Skelton, Secretary and Treasurer

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President, Dr. Lewis B. Porter President; Dr. H. C. Messinger, Secretary.

NOTICE

The House of Delegates having voted that the dues shall be $10.00 for 1918, the Treasurer desires to call the members' attention to Article IV Sec. 6 of the By-Laws: "Every Fellow shall annually contribute the Annual dues and the same shall be due and payable to the Treasurer, January first of each year."

EDITORIALS

On the eve of his hurried departure for Halifax, the editor was obliged to turn over the work of bringing out the current issue to his associates on the editorial board, who generously assumed the burden. On his return, he finds the work so well accomplished that the medical public are immeasurably the gainers.

THE PROFESSION AND HOSPITAL.

These are history-making years. Governments, geographical boundaries and nations are

being changed with startling rapidity. In commercial interests new fields are opened and new methods necessary, while social and economic questions that to-day may be solved in a certain way will to-morrow require a new solution. Unwise is the party or government which attempts to solve these problems from their viewpoint alone; equally so the man or body of men who control organizations affecting large numbers if a settlement of difficulties is attempted without considering the rights and interests of all concerned. No man stands so pre-eminently above his fellows that he can give an opinion satisfactory to all, can affect a decision in mooted questions fair to all, and it is for this reason that we rely upon the judgment of a commission which represents all factions. In commerce, in labor, in war, this principle is accepted and followed.

The problem affronting the Rhode Island Hospital this year faces a large deficit, if we correctly understand the appeal of the trustees for greater financial aid, is that either more money must be provided, or the charitable work of the hospital must be curtailed. There are interested in the solution of this equation four factors: the charitable public, the management of the hospital, the medical profession, and beneficiaries of the hospital, and we venture to assert that any decision which rests solely upon the financial side of the question will be inadequate and unsatisfactory. There are other methods which may be employed to make the balance come on the right side of the ledger; there are other people interested in the hospital besides those who contribute financial aid. The medical profession gives to the hospital more than money. It gives its skill, its time and its life blood. It gives what cannot be obtained elsewhere. It gives what is an absolute necessity for the continued existence of the hospital. It knows more about the poor of the city, its needs, and the remedy, than all the social workers combined. It does in aggregate charity more than the hospitals combined. It is vitally interested in all the problems which confront the trustees of the hospital. Why then should not the profession be consulted in this matter? Why should not their opinion and advice be sought? Why should they not have a hearing upon matters in which they are vitally interested?

Occasion has been taken more than once in these columns to urge upon the trustees of the various hospitals that they should elect to membership a physician who could afford information regarding the professional side of hospital work, a phase with which the lay trustee is not supposed to be conversant, or appoint a consulting committee from the staff, or a single member of the staff who could present for their consideration the various problems arising in hospital work and the opinions of the working staff without being considered presumptious. The profession is a unit in its willingness to bear its share of the burden, in eagerness to serve. They deserve, however, some recognition that is not usually accorded to employees.

If those in charge of the various hospitals would invite the profession to unite with them in a study of the problems confronting them, would give weight to their opinions, or a voice in their decisions, they might learn of ways of retrenchment other than cutting salaries; ways of increasing usefulness without increased expense. Inspired by no spirt of fault finding, willing and eager to do their share, the profession is entirely within its right when it asks to be heard.

THE HALIFAX RELIEF.

On Saturday, December 8, 1917, the people of Rhode Island once again were given a demonstration of the spirit of altruistic charity that permeates the body medical of this community. On Thursday the country was shocked by the news of the terrible catastrophe that visited the city of Halifax. On Friday some of the doctors in Providence were asked to volunteer to go to aid the sufferers, and although some of the men did not receive word definitely that they were wanted until after eleven o'clock at night, they were ready to start at eight o'clock Saturday morning. They were told their stay was indefinite. They could not arrange their work and in one case at least, if not in more, their office assistants did not know they were going until after they had gone. This one feature alone is worthy of note. We are somewhat accustomed to seeing the doctor give of his time, energy and skill after he has arranged matters so as not to be at too great a loss financially, but this was an innovation that meant more in a monetary sense perhaps to the men who so generously and promptly dropped everything and went than any other one act within the memory of most of us.

In these horrible war times the demands upon the generosity of the citizens, and that always includes the doctors, is almost innumerable. In the case of the doctor it is doubly hard in that he is expected to donate money as well as his time and skill, while the ordinary layman is asked to give his money only. While this trip was arranged and managed by the local branch of the American Red Cross and any expense involved was paid by them, nevertheless the doctor did in this case again give both his time and his money.

Dr. N. Darrell Harvey of Providence, who was a native of Halifax, was instrumental in the organization of the unit, and after a session with the President of the Rhode Island Chapter of the American Red Cross was able to get the use of five Pullmans and a diner to leave on Saturday morning. Mr. Carl B. Marshall, the Treasurer of the local branch, generously volunteered to go along as the financial man of the party, and proved himself the right man for a very unenviable job. He was able to perform the seemingly impossible feat of inducing the Pullman Company to allow their cars to remain at Halifax to be used by the doctors and nurses as their lodging place while in that city and thus relieve the authorities there of one more burden of providing for them.

The Providence men were joined here by men from Fall River and New Bedford who were to have gone with the Boston Unit. Doctors and nurses were taken on at Woonsocket also, and at Portland a quintet of Social Service Workers from Boston. In all the party totalled 111. When the train pulled into the yard at Halifax they were able to feed and lodge themselves, and were the only Unit to arrive there of which this can be said. They also brought their own nurses and surgical dressings and some foodstuffs. They were not dependent upon anyone in Halifax for anything, and most of the doctors carried their own instruments, in not a few cases some of the men having as high as three and four complete sets of surgical instruments, even to complete laparotomy sets, with all the sterile dressings included. To anyone who knows the amount of detail necessary to collect and arrange these things for an operation when there is plenty of time for their collection and arrangement, it will be little short of marvelous, especially when it is considered that notice was not received by many of them until nearly midnight. It would appear to mean very little sleep. It did mean just that, none for some of them, and yet there was not one sign of complaint or regret from that large number except the displeasure that they were not already on the spot.

It was a splendid tribute to the sterling worth of these good men and women. For the nurses deserve their share of praise as well as the doctors. To them also the sacrifice is one of more than time only. There are very few nurses who have any means of livelihood other than their income derived from nursing. While this is not true of all the doctors, many of them having some slight income, at least, even when they are not practicing their profession at home for pay, but this is hardly true of the nurses.

THE PROBLEM OF CHOREA.

Some of us who have had occasion to observe and to treat any considerable number of patients suffering from chorea hold certain very definite opinions, right or wrong, about it. To begin with, it is necessary to determine with some precision what we mean when we say that a patient has chorea. Turning then to the dictionary we learn that chorea means dancing, and is the word used to denote St. Vitus' dance, which is defined as "a functional nervous disorder usually occurring in youth, characterized by irregular and involuntary action of the muscles of the extremities, face, etc., with general muscular weakness." Reading further we learn that chorea has as synonyms, CHOREA ANGLORUM; CHOREA SANCTI VITI; EPILEPSIA SALTATORIS; ST. JOHN'S DANCE. And if this is not enough to stretch our PIA MATERS, we have only to continue down the page, where we will find standing forth in heavy type a whole Praetorian cohort of choreas, some fifty or more in all. Now, surely, here is some confusion; material, too, as Sir Arthur Quiller Couch might say, for a very pretty little essay upon medical jargon.

Well, then, in the matter of definitions, we have to choose, and so, following tradition, we choose to call that condition, and only that condition, chorea which was so carefully described by Sydenham in 1686, and which is marked by involuntary spontaneous movements, by weakness and want of precision in voluntary movements, and by emotional instability, with, at times, more serious psychical disturbances. If

we keep to our definition, the word will have for us some definiteness of meaning and we shall not call chorea St. Vitus' dance, for it has nothing to do with dancing, St. Vitus' or any other. Why indeed should we continue to talk jargon simply because our forefathers mistakenly did so? Again sticking to our definition, we shall not darken counsel by speaking of, say, paralyzed limbs with athetoid movements as "hemiplegic chorea," nor label as chorea the various habit spasms and tics, for whatever else these are they are not chorea. But, above all, let us not relapse wholly into barbaric speech by committing the solecism of "false chorea,"—twin brother of "pseudo-angina" and the whole uncouth and mongrel brood of words beginning with "pseudo."

We said just now that some of us have certain positive opinions about chorea, of which opinions the most positive is this: Chorea, as defined above, is always the body's reaction to some infection. It may be admitted, and freely admitted, that other factors are at work in this patient and in that, such as emotional strain, developmental instability, fright, poor nutrition and so forth; but we would stoutly defend the proposition,—no infection, no chorea. It is curious that this problem of infection is passed over so lightly in many of our text-books, and those, too, amongst the most recent. Some of them speak of infection from tonsils and adenoids; but of seven which lie before us as we write, not one refers to the role of infected teeth and gums in etiology, prophylaxis or treatment. And yet to any one who has himself seen the rapid and really remarkable improvement in the condition of choreic patients which sometimes follows treatment of these focal infections, such omission seems serious and inexplicable. Knowing, as we do, that endocarditis occurs more frequently in chorea than in acute rheumatism, is it not a reasonable postulate that infection is at the root of the business? And, furthermore, is it not, to say the least of it, a short-sighted policy to put our trust in aspirin, or salicylates, or arsenic, or diet, or anything else, unless we have at the same time discovered, if possible, and removed any source of infection? But not to labor the point further we shall end by claiming that to be a rational working hypothesis which maintains that Sydenham's chorea is the body's reaction to some infection. If such it is, the inference for practice is clear,—remove the infection, and, what is equally important, forestall relapses by preventing reinfection.

RHODE ISLAND MEDICAL SOCIETY.

The records of the December meeting of the State Society are unavoidably delayed owing to the illness of the Secretary, Dr. J. W. Leech. They will appear in the February issue of the JOURNAL.

SOCIETIES

RHODE ISLAND MEDICAL SOCIETY

SECTION IN MEDICINE.

A regular meeting of the "Section in Medicine" was held in the Medical Library on November 27, Dr. D. Frank Gray presiding. The paper of the evening was by Dr. Augustus George Gigger on "Laboratory Technic." Discussion was opened by Dr. W. L. Harris, Dr. Carl D. Sawyer and others.

A meeting of the "Section in Medicine" was held at the Medical Library December 18, 1917, at 8:45 p. m.

Paper: "Vaccine Treatment of Typhoid," by Dr. Henry A. Cooke.

CREIGHTON W. SKELTON, M. D.,
Secretary-Treasurer.

DISTRICT SOCIETIES

PROVIDENCE MEDICAL ASSOCIATION.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library on December 3, 1917. The meeting was called to order by the President, Dr. F. E. Burdick, at 8:35 p. m. There were present at the meeting 74 members and 11 guests. The records of the preceding meeting were read and approved. The application for membership of Dr. John H. Morrissey was read and referred to the Standing Committee.

Dr. Jeannie O. Arnold, Dr. Mary E. Gaffney and Dr. James P. McKenna, having been approved by the Standing Committee, were elected members of the Association.

On recommendation of the Standing Committee, it was voted that members of the Association

in active service of the United States be excused from annual dues beginning January 1, 1918.

In accordance with Article I, Section 6, of the By-Laws, the Standing Committee presented the following nominations for officers and committees for the year 1918:

For President—William F. Flanagan, M. D.

For Vice-President—Harry W. Kimball, M. D.

For Secretary—Charles O. Cooke, M. D.

For Treasurer—Winthrop A. Risk, M. D.

For Member of Standing Committee for five years—Frank E. Burdick, M. D.

For Trustee of the Rhode Island Medical Library Building for one year—Henry C. Hall, M. D.

For Reading Room Committee—George S. Mathews, M. D., Frank T. Fulton, M. D., M. B. Milan, M. D.

For Delegates to the House of Delegates of Rhode Island Medical Society—J. E. Mowry, M. D., Henry J. Hoye, M. D., D. L. Richardson, M. D., P. Williams, M. D., A. D. Rose, M. D., George R. Barden, M. D., W. H. Magill, M. D., E. S. Brackett, M. D., William Hindle, M. D., Albert H. Miller, M. D., Walter G. Sullivan, M. D., Frederic N. Brown, M. D., Harold G. Calder, M. D., Harry C. Messinger, M. D., Robert C. Robinson, M. D.

Dr. Joseph F. Hawkins, business manager of The Rhode Island Medical Journal, made an earnest plea to the members to aid in securing advertisements for the ensuing year.

The first paper of the evening, entitled "Some Points in the Diagnosis of Heart Disease," was read by Dr. William H. Smith of Boston, Mass. The discussion was opened by Dr. George S. Mathews, who emphasized points brought out by the reader in his paper. The discussion was continued by Dr. J. H. Haberlin, who stated that a murmur heard at the apex of the heart did not necessarily mean heart disease, and also stated that he had under observation four cases of pulmonary stenosis, all over thirty years of age.

The discussion was further continued by Dr. Gray, who emphasized the value of careful history taking, and asked concerning the practical value of the electrocardiogram.

The discussion was closed by Dr. Smith, who stated that the electrocardiogram was of value in cardiac irregularity, heart block and heart weakness.

A rising vote of thanks was given to Dr. Smith for his paper.

The second paper, entitled "Lead Poisoning a Cause of Obscure Disease," was read by Dr. W. L. Chapman. This paper was freely discussed by Drs. Gray, Sundin, Cutts, Farrell, Leonard and Kerney.

The meeting adjourned at 10:20 p. m. A collation was served.

Charles O. Cooke, *Secretary.*

HOSPITALS

Rhode Island Hospital.

The annual meeting of the Rhode Island Hospital Staff Association was held at the hospital December 10, 1917, at 8:45 p. m.

Business, election of officers, and selection of time of services.

W. O. Rice, M. D.,
Secretary.

MISCELLANEOUS

Dr. H. E. Blanchard has received a commission as Captain in the M. R. C., U. S. A.

Dr. J. W. Leech has been confined to the City Hospital for several weeks with an attack of diphtheria.

The Memorial Hospital has announced a new schedule of prices as follows: After December 15 the ward rates will be $15 per week, double private room $18 per bed, special nurse's board $7 per week. The following scale for X-ray examinations has been adopted:

Proposed Fee Scale for Roentgen Examinations.

Extremities below hips and shoulders	$ 5.00
Teeth (two positions)	5.00
Simple shoulder	5.00
Difficult shoulder	10.00
Hip	10.00
Chest	10.00
Neck or local spine condition	10.00
Urinary bladder	5.00
Pelvis	10.00
Skull	10.00
Sinuses	10.00
Urinary tract	10.00
Colon (Barium Enema)	10.00
Gall-bladder	10.00
Gastro-intestinal tract (including gall-bladder)	25.00

THE RHODE ISLAND MEDICAL JOURNAL

The Official Organ of the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

VOLUME II
NUMBER 2
Whole No. 116
PROVIDENCE, R. I., FEBRUARY, 1918
PER YEAR $2.00
SINGLE COPY, 25 CENTS

ORIGINAL ARTICLES

POLIOMYELITIS, ANTERIOR, PATHOLOGY, SYMPTOMS, INDICATIONS AND TREATMENT.*

By William Benham Snow, M. D.,
New York, N. Y.

Poliomyelitis, a disease usually occurring in epidemics, is characterized in most cases by paralysis, chiefly referable to an involvement of the spinal cord and meninges. Recent investigations have demonstrated it to be infectious, in character, of varying intensity, not in all cases causing paralysis, and sometimes manifesting congestions of the mucous membranes of the nose and fauces, with involvement of the gastro-intestinal tract. The identity of the particular germ of the disease and its origin and method of transmission are still unsettled questions.

The Flexner School seems ready to contend that it must always be originated from one infected. While it is conceded that it may be transmitted from individual to individual, there is abundant evidence that there are other sources from which the condition originates. A personal study of the disease and its origin for the past eighteen years has demonstrated that isolated cases do occur with ample evidence that the disease had not been transmitted from another human being infected. Exposure of children to damp earth in isolated communities indicate its source from such origin. An isolated case occurred from a child playing in a shaded spot on the beach at Cape Cod, another playing on a Long Island beach, another playing in the soil of the Catskill Mts., and two boys playing in an isolated pond in the town of Red Hook, and still another from playing during a humid period in a city garden, when there was no epidemic in any of these cases. Numerous other cases could be cited but these will illustrate what is meant to be conveyed. It seems that damp shaded places offer sources of infection for the malady. It will be observed furthermore that the epidemic of 1916 occurred following and during summers of unusual dampness and humidity. It was observed also, that during that epidemic, when a period of cessation from rain for several days occurred, there was a reduction in the number of new cases, the number of new cases again increasing when the weather changed again to rain and humidity.

Two things were observed in the recent epidemic of New York: First as to the class affected. It will be observed from Table 1

TABLE 1

From the New York Board of Health Report

Born in the United States	3,825
Foreign born	5,180

that the largest percentage of children affected were of foreign birth, persons living under bad surroundings and in sections of the city having less favorable hygienic conditions. Furthermore, of the other cases a large number of them were born of foreign parents residing in the city. While this fact must be conceded from the statistics it is not in accord with a statement made in the Public Health Bulletin No. 44 issued by the Treasury Department in 1912, in which it was stated that "poverty and unsanitary conditions of life seem to have little if any influence in determining infection. All classes are affected in about equal proportions." The epidemic in New York seems to contradict these observations though as a matter of fact many cases did occur among the better classes, though they were comparatively few.

*Read before the Rhode Island Medical Society, December 6, 1917

TABLE 2
SHOWING MILD DEGREE OF SUSCEPTIBILITY
(From New York Board of Health Report)

Number of Cases	Number of Children Residing at Home								
	1	2	3	4	5	6	7	8	
1 Case in family	989	1,200	951	645	376	210	113	44	
2 Cases in family	...	108	73	50	30	18	6	5	36 over 8 years 61 adults
3 Cases in family	...	.....	8	4	2	2	1	..	7 over 8 years 2 adults
4 Cases in family	...	.....	...	1	1	...	..	..	
5 Cases in family	...	.....	..	...	1	...	...	1	

As to the contagiousness of the disease, the accompanying table seems to show conclusively that while mildly contagious it is not to be compared in this particular with the contagious character of the exanthematous diseases.

It will be observed that in a very large number of cases where there were two or more children in a family, but one was affected and in but very few cases more than one case occurred even in large families. This has been observed in most instances from the histories of cases taken by the writer.

The management of cases during the epidemic in New York was painful. Removing children from their homes and isolating them with as great care as cases of small pox. They were taken away from their homes and under a management largely experimental employing methods to which may have been due much of the fatality. The attitude of those in authority during this epidemic, was deprecated by those who were able to employ physical methods, and did in isolated cases with success; often in the most serious cases.

I regret to feel called upon to make this observation, but the painful conditions arising and seeming negligence in cases which came later under observation, and familarity with the course pursued, lead to the above criticism.

While it is conceded that the diease is transmissible from individual to individual, it is entirely possible to isolate these cases in a room in the home, as of cases of scarlatina or diphtheria, and allow them to remain in their own homes where physical methods of treatment could be administered, as radiant light in many cases instead of the less successful course so often pursued. In our judgment the indications for removals should be only in cases of poverty or where facilities or administering light and other physical measures were not installed—rather for treatment than quarantine. It is to be hoped that in another epidemic a more conservative management will be instituted and that a more rational regime may be adopted in the management of these cases.

The following table will show that a relatively low percentage of deaths occurred in this generally considered (see Table 3) serious epidemic compared with the population of New York. It would have been equivalent to one or two cases

TABLE 3
POLIOMYELITIS—CASES AND DEATHS
Rate per 1,000 Estimated Population, City of New York at Different Ages

	Cases	Deaths	Case Fatality
Total, all ages	8,914	2,406	
Rate per 1,000 population	3.80	1.03	26 99
Under 1 year	982	423	
Rate per 1,000 population	18.40	7.93	43.08
1 to 2 years	1,775	521	
Rate per 1,000 population	34.24	10.04	29.35
Total under 5 years	7,056	1,897	
Rate per 1,000 population	28.86	7.60	26.89
Total under 10 years	8,488	2,274	
Rate per 1,000 population	18.20	4.88	26.79
Total, 10 years and over	426	132	
Rate per 1,000 population	.23	.07	30.99

in a town of 1,000 people, and yet as much consternation was created over this epidemic as if typhoid fever had been present with a large number of cases.

Pathology: "In a study of acute poliomyelitis," of the Rockefeller Institute, by Drs. Peabody, Draper and Dochez, the following pathological findings are reported:

"At autopsy the meninges are usually found to be somewhat edematous and injected. There is little increase of cerebro-spinal fluid. The brain and cord, on section, have a moist, translucent, edematous appearance, and the gray matter of the cord is often swollen so that it projects above the level of the white matter. It is darker than normally in color and is typically of a grayish pink hue. Not infrequently minute hemorrhages can be distinguished in the gray or white matter.

"The exact path by which the virus enters the body is at present not definitely known, but there is clinical and experimental evidence which makes it seem probable that infection frequently

gains access from the upper respiratory tract. It has been shown, both anatomically and experimentally, that the upper nasal cavities are in direct communication with the meninges by means of the lymphatics which pass outward with the filaments of the olfactory nerve. The view that the virus may enter the body by means of those lymphatics and thus exert its first effect upon the meninges is strengthened by the anatomical findings. The earliest change which has been described in the nervous system is hyperemia and the collection of numbers of small mononuclear cells, probably lymphocytes, in the perivascular lymph spaces of the blood vessels of the leptomeninges. These lymphatic spaces surrounding the vessels are anatomically processes of the arachnoid spaces, and the lymph in them is in communication with the cerebro-spinal fluid. This first change, then, is an acute interstitial meningitis, which is not associated with fibrin formation or with exudate on the surface of the meninges. It is usually most marked on the anterior surface of the spinal cord, and especially in the anterior fissure, from which the larger vessels enter the cord; but smaller collections of cells are often found along the meningeal vessels which are situated over the lateral and posterior aspects of the cord. The blood supply of the cord is derived from the vessels of the meninges, and with the advance of the pathological process, this perivascular infiltration follows along the vessels as they enter the cord from the meninges. Thus the earliest change that is found in the cord itself, both in human beings and in the experimentally produced disease, is hyperemia and the collection of small round cells in the lymph spaces surrounding the vessels. This cellular exudate forms a sheath apparently completely surrounding the vessels for long stretches and in many places the cells are so numerous that they form thick collars which seem to press on the lumen, and thus exert a mechanical effect in obstructing the circulation. While the cellular exudate is in the outer part of the vessel wall, it is probable that there is often some effect, either toxic or mechanical, on the intimal lining of the vessels, for hemorrhages, minute or extensive, are frequent findings, and one of the prominent features of most cases is the extensive edema. These three factors, cellular exudate, hemorrhages, and edema, all of them dependent on vascular changes, may perhaps be regarded as the primary reaction of the nervous system to the virus of poliomyelitis. The effect produced on the nerve cells themselves are probably either dependent on these vascular disturbances or they may be due to a direct action of the virus. This superior importance of the vascular system in determining the nervous lesions has for a long time explained the fact that the cervical and lumbar enlargements of the cord are most affected, and that the anterior horns of the gray matter are more involved than the posterior horns of the white matter. These are, of course, the regions of the spinal cord to which the blood supply is most abundant. Moreover, the frequency with which lesions are asymmetrical probably depends on the irregularity with which the vessels supplying the cord are given off at different levels. It has been suggested that the process by means of which the vascular lesions affect the nerve cells may be essentially a mechanical one. It is quite impossible to exclude the fact that the virus may exert some directly toxic action on these cells, but in many ways, the clinical and anatomical pictures are readily explained by the presence of the circulatory disturbance and of the exudate. On such an hypothesis the damaging effects can be assumed to result in part from the direct pressure of the nerve cells of hemorrhages, edema and exudate. There is also the additional factor of anemia following the constriction of the blood vessels by the same mechanism. On account of this pressure and anemia, the nerve cells degenerate. If the hemorrhage and exudate are absorbed soon enough, the cells may recover their function. If, on the other hand, the anemia and pressure have been prolonged or excessive, the nerve cells go on to complete necrosis. Histological examination shows nerve cells in all stages of degeneration, from those with the slightest changes in their protoplasm to others of which only a granular detritus remains. A most striking picture is formed by the entrance of polymorphonuclear neurophages into the necrotic nerve cells. A single nerve cell may be invaded by a dozen of these phagocytes, and by means of the necrotic material is completely disposed of. In more severe lesions, one sees the hyperemia, the perivascular infiltration, hemorrhages, edema, and a diffuse cellular infiltration throughout the gray and white matter, but nerve cells may be

completely absent from the picture. These changes, most prominent in the anterior horns of the gray matter, are not sharply circumscribed, but are scattered more or less diffusely through both the gray and white matter of the cord.

"The same sequence of changes, vascular disturbance, and subsequent degeneration of the nervous elements, is found to a less degree in the brain, medulla and pons. Hyperemia and a moderate amount of cellular infiltration may be found in association with the vessels of the cerebrum and cerebellum, but lesions extensive enough to produce motor symptoms are exceedingly rare. The medulla and pons show some slight degree of involvement in most cases, and one frequently finds in them a marked cellular exudate and many hemorrhages. It is noteworthy, however, that it is often extremely difficult to reconcile the clinical symptoms, which are referable to pontine lesions, with the actual autopsy findings. Cases which have shown bulbar paralyses in life may fail to show adequate anatomical lesions to account for them, and other cases which have given clinical evidence of spinal involvement only may show changes through the pons and medulla.

"Of practically constant occurrence are the lesions in the posterior root ganglia. The histological changes are similar to those that take place in the cord itself. There is an infiltration of small round cells in the lymphatic spaces surrounding the vessels which enter the ganglia from the meninges. This has been shown experimentally to be the first step in the process. Then follows a more general, diffuse exudation of cells, degeneration and necrosis of the nerve cells, and finally the entrance of polymorphonuclear leucocytes into the necrotic cells and removal of the disintegrating cells by neurophages. The suggestion has been made that these lesions in the sensory ganglia may in part account for the pain which is such a constant feature of the acute stage of the disease. Another element in the production of pain is the cellular infiltration which is found along the nerve roots."

In the fatal cases, the rapidity with which the disease invades the system seems to account for the fact that little or no structural changes are observable. The regeneration of the parts affected with the return of the functions of the groups of muscles paralyzed in many instances points to the fact that pressure due to infiltration has been the real cause of the objective symptoms, and that when these have been relieved the parts affected gradually return to normal. These observations are borne out by autopsies held on patients who have died with the disease in the late epidemic.

The peculiar confining of the disease to the anterior portion of the spinal cord is found, and a distinct tendency seems to exist for the inflammatory changes to follow the anterior dural vessels of the brain and cord. The duramater may become much congested, with hemorrhages present, while in other cases they become tense and shiney, and an edematous condition of the piameter is found. When the edema is localized it is usually found in the cervical region, and it occurs in some cases throughout the entire length of the cord. Hemorrhagic conditions have been found at autopsy in cases involving the entire length of the cord. Such hemorrhage in poliomyelitis is not only confined to the anterior dural vessels, but also continues sometimes into the interior horn of the cord. This occurs in a large percentage of cases involving the cervical region.

Symptoms. Temperature: The most striking and common symptom in the onset of poliomyelitis is fever, though it will be observed that in some of the cases, even the fatal cases, fever seems to have been absent. There is a remarkable lack of relation between the temperature and the pulse rate. The following observation is made from a study of the cases in over 500 in which recovery took place in the recent epidemic. Two cardinal points were observed, as compared with fatal cases. In cases that recovered there was nothing to show that in the primary temperature of the infection there existed any fever connected directly with the disease; whereas in the cases in which death occurred the initial temperature continued on to exceptionally high points, falling just before death. There were cases that lasted not over three days, when in some cases the temperature reached 110° F. Some cases, however, terminated in twelve hours without any rise in temperature whatever.

Other variations in temperature were dependent upon conditions associated with individual cases. In cases with recovery the temperature returns to normal usually before the seventh

day. Occasionally a subnormal temperature will follow. It is observed, further, that the disease is not accompanied by fever other than a rise of temperature at the outset. A rise in temperature succeeds lumbar puncture and usually follows an injection of immune or normal serum. The most common cause for rises of temperature during the course of the disease are nasal, laryngeal and pharyngeal inflammation, otitis-media, bronchitis, pneumonia, gastro-enteritis or a combination of intervening infectons. The temperature has been found to rise 5° F. after an injection of normal serum.

Pulse: At the outset of the temperature, we have an initial rise of pulse rate, the pulse beginning to fall at the same time that the temperature falls, but more rapidly in proportion. Seventy per cent. of the non-fatal cases tend to terminate by lysis on the seventh day. The average pulse rate in the fatal cases was about 130 up to the seventh day, when, if the child did not return to normal, it remained at approximately 120 to the fourteenth day, dropping to normal on the fourteenth day, or, in more severe cases, continuing at from 110 to 120 up to the twenty-first day. These rates were referable to cases five years of age or under.

Great irregularity of the pulse, however, exists throughout the disease, drops in pulse rate occurring frequently without warning. The lowest pulse rates were noted before the seventh and the twenty-first days. One of the simple diagnostic signs in the pulse rate of poliomyelitis is a continued rise of pulse without any corresponding rise of temperature. This may occur under conditions in which the patient seems otherwise to be in every particular doing well. The pulse may run from 120 to 130 and 140 or more and then suddenly drop, finally returning to normal. This disparity of the relation of pulse and temperature is one of the characteristic symptoms of poliomyelitis.

Respiration varies with the conditions, pulmonary and cardiac.

Restlessness seems to be one of the characteristic symptoms of the onset of the disease, with a degree of insomnia and extreme continued threshing about. This restlessness is as a rule due to pain.

Headache is often one of the symptoms of the onset of the disease, and may persist throughout the entire case, varying in degree from a simple frontal pain to an intense continuous agony. If localized it is confined usually to the frontal or occipital regions or it may be localized on the right side or left side of the head.

Pain and Hyperaesthesia: Before the paralysis extreme hyperaesthesia is often found and it may persist throughout the entire course, and may be either localized or general. When localized it is usually referred to the region of joints, over the spinal cord, or to the back of the neck. In fatal cases generalized hyperaesthesia is more frequent than the localized. Hyperaesthesia is not constant and cases may come to a fatal termination without the appearance of the symptom.

Pain coexisting with hyperaesthesia may be generalized or local, and the generalized is usually referred to the muscle structures of the body; whereas when localized it is referred frequently to the spine, usually on motion or pressure. These pains may be constant or only illicited on pressure or movement. This symptom of pain is the most troublesome and trying of any to the patient during the early stages of the disease, the child frequently crying out with agony.

Involvement of the Gastro-Intestinal Tract: Vomiting and enteric symptoms occur in some of the cases. Constipation occurs also, probably due to localized paralysis. Mucous discharges from the nose and throat is a prominent symptom in about 13 per cent. of the cases, and not of sufficient frequency to give it great significance. In bronchitis or laryngitis a croupy cough may occur associated with a congested condition of the larynx and pharnyx, which may later end in broncho pneumonia or pulmonary edema.

Eruptions occur in some cases, though it is not characteristic of the disease.

The reflexes may or may not be lost in varying degrees.

Tremor: Among the earliest symptoms recorded is muscle tremor, which varies very much with the intensity of the disease. It may be constant or intermittent. Marked muscular contractions are present in some cases and may involve the fingers, face, lips or any part of the body. In some instances contraction may develop into paralysis, the child developing convulsions, finally ending in coma and death. Convulsions may be either tonic or clonic. These symptoms may in some cases be the first symptoms of the onset, but they more often occur later in the disease. In many of the cases,

months after the onset of the disease, this condition of tonic spasm exists. It is one of the conditions that has been shown to be so remarkably relieved by applications of light and heat.

Paralysis: The recent epidemic has clearly demonstrated that there may be a severe infection with a fatal result unaccompanied by paralysis, and that spastic paralysis is common in poliomyelitis. In rapidly developing cases the infection has resulted in paralysis of the vital centers before muscle paralysis can set in, which is especially true of the bulbar type. It may be said, however, that in a large majority of cases paralysis does exist in some form. Spasticity of particular muscle groups may be manifest. The other symptoms enumerated are of less importance and not indicative of anything special, other than symptomatic treatment.

Indications: From the foregoing symptoms associated with the pathology of the condition the following indications present: (1) If possible, the destruction of the germ, which has been stated by Flexner to be very susceptible to radiant light. (2) The relief of the local spinal congestion either by derivation or other treatment. (3) The relief of bronchial accumulations and collections of fluid in the lungs in the extreme cases. (4) Stimulation of the weakened cardiac and respiratory centers. (5) The correction of gastro-intestinal disturbances. (6) The relief of pain and hyperaesthesia. (7) The relief of muscular spasm. (8) The maintenance of nutrition in paralyzed muscles during the periods of paralysis. (9) The treatment of the paralysis, which naturally includes the relief or removal of spinal effusions or congestion. (10) The prevention and correction of deformity. (11) The continuous observation and management of the case for years after the onset for the removal of paralytic conditions.

Treatment: In the treatment of infantile paralysis issue must be taken with the general observations of the neurologists and orthopedic surgeons who have expressed themselves violently against the employment of physical measures with which they are not familiar, such lack of familiarity being the only excuse for the attitude they have taken.

The measures which we shall consider of paramount value in the management of these cases are *radiant light and heat,* reflected from a properly constructed incandescent light apparatus. The ultra-violet rays play no special role in the treatment of these cases; whereas radiant light and heat projected from properly constructed incandescent light apparatus offers one of the most useful measures in the treatment of poliomyelitis.

Electricity: The static, high frequency, and sinusoidal currents, are employed according to the indication, stages of the disease or condition of the patient. Massages and mechanical vibration are gently applied to the affected muscles, together with exercise, active and passive. Intense efforts of the will of the patient are wisely applied to induce movement of parts paralyzed.

The experience or results of the past year in the uses of serums, with which the writer had no familiarity, except from a study of the records furnished, does not seem to warrant marked consideration.

Immunization is confessed to be impractical, as so small a part of the community show susceptibility to the infection as shown by the table, and though it may have proved successful in rabbits it has not seemed to be of sufficient value in the human subject to warrant its adoption. The employment of serum therapy after the onset of the disease seems futile, as the damage has already been done before the serum could be applied and as applied has proved of little value, as records show.

Prolonged hot baths in lieu of the opportunity to employ radiant light and heat is of undoubted value in all early cases for inducing derivation of the blood to the skin. The use of various laxatives and heart stimulants and other medication are indicated according to conditions.

The symptoms presenting in this affection point from the onset, first to the destruction of the germ. It has been stated by Flexner that the germ of poliomyelitis is especially susceptible to radiant light; and it has been demonstrated clinically in the hands of those who have employed it intelligently, that in nearly every case in which long application of radiant light and heat have been applied in the early stages of the disease, it brings prompt relief. Light penetrates the tissues from four to six inches. It is found to be of great value

in all severe cases, often being followed by prompt restoration of all the functions. To say that these cases would have terminated favorably otherwise is assumption; for the showing indicated that wherever light has been applied with long administrations to the whole body, and particularly over the spinal region, the benefit has been salutary and fatalities have not occurred. This measure was applied first by the writer in 1910 in the treatment of a child eight years of age in the family of a physican. This child was nearly moribund after the third day of the disease, presenting the following condition: Paralysis complete of all limbs and extremities, pulse feeble at 130, temperature moderate, moist rales throughout the lungs with marked rattling in the throat and inability to raise it. The child was conscious, but stupid. Radiant light and heat in this case was applied over the whole body of the patient from a high candle power incandescent lamp for fully one hour, when the surface of the body was generally hyperemic. This was followed by a twenty-minute application of the static wave current with a long spinal metal electrode over the spine. Three hours later the child awoke, having slept in the interim. The body was covered with beads of profuse perspiration and the clothing where in contact was wet from the same. The rales had disappeared entirely from the chest and the rattling from the throat. The child could move an arm and a shoulder. The pulse, owing to the loss of fluid, had increased to 160. The same treatment was repeated daily, and improvement began from this time with rapid progress of all the conditions to recovery. This result from the use of light led me to urge its use by the profession for the purpose of lessening the spinal congestion by derivation of the blood to the skin, which is capable of holding two-thirds of the blood of the body. The effect, thereby, is to relieve the congestion in the cord, as it removed the fluids from the lungs in that case.

Prior to this time no demonstration had been made of the susceptibility of the bacteria to light, though the results in this case and in numbers of cases, that have since been treated in this manner, seem to have established the possibility of such germicidal effect upon the bacterial process, as well as of relieving the spinal congestion.

Furthermore, the application of radiant light and heat very promptly relieves the pain and spastic contractures for these little sufferers. The employment of this method with our patient and in many other cases has demonstrated its great value when applied in the treatment of early cases of poliomyelitis. I am confident that a large percentage of the fatal cases would terminate otherwise if radiant light was administered from the outset.

It must be observed further that radiant light and heat applied to the surface in these cases plays not only the part of relaxing and relieving tension and the derivative effect upon congestion, but also stimulates to greater activity the deep spinal centers by the reflex stimulating effect of heat when applied to the peripheral nerves. This is an important matter to be taken into consideration in these critical cases,—in all cases, in fact, in which the pulse and respiration indicate failing powers of the vital centers.

The value of radiant light and heat in the treatment of chronic cases was well illustrated to the writer in the experiences that came under his observation in Ward 40 of Bellevue Hospital, where a large number of cases were placed. The little children, the aftermath of the New York epidemic, which were still under public treatment in the hospital, came under my observation last January at the request of Dr. Reginald Sayre. I immediately installed in the hospital a number of reflecting lamps and canopies for the treatment of the limbs and bodies of these little patients, which were otherwise constantly cold. I found them in various conditions in the wards, some able to move about in a crippled condition and others in bed, but all of them with cold legs and extremities. I urged the provision of warm woolen stockings, which were promptly forthcoming for these cases, and the daily use of radiant light and heat and more blankets, with other means of keeping their extremities warm during the intervals between treatments. This proved one of the greatest boons and aids in the management for the improvement of these cases, and is to be urged in the treatment of all cases of poliomyelitis. We

placed two children under a large canopy reflector with their whole bodies exposed to the light, and covered the canopy with blankets to retain the heat. Following this the sinusoidal current was administered for the exercise of the muscles. The light applied in this manner reduced the labor of massage more than half. In these chronic cases the sinusoidal current plays a most important part as a means of exercising the affected muscles. For this purpose I installed a sinusoidal apparatus in Bellevue Hospital. It should always be employed with a view to affecting the centers as well as the periphery, which is accomplished by placing one electrode over the corresponding spinal centers and the other to the affected parts—in this way linking together the centers and the neuromuscular mechanism. A slip-shod administration of the Constant and Faradic current, too often in vogue, applying the opposite poles to the ends of the muscles, without reference to the centers involved, is irrational. It is not only the exercise of the muscle that should be considered, but the centers where the lesion is. For this reason in the treatment of these cases, as well as of the acute cases, measures should always be employed to improve the metabolism of the cord, to increase the circulation and nutrition of the impaired cells, as well as freeing them from the pressure that is often persistent after the acute stage of the disease. That pressure and impaired metabolism do persist is demonstrated from the fact that in the writer's experience very many cases have responded with remarkable improvement following the application of the static wave current over the spinal centers. This has not only been demonstrated by the writer, but by numerous other observers who have verified his results. Dr. F. E. Peckham has reported cases of this sort in which the improvement was marked from the outset. I have observed cases which, after five months, with complete paralysis of both lower extremities, have made recovery within a few months with the use of the wave current; with very little impairment of the muscles persisting.

The static current in the treatment of poliomyelitis plays an important role during the acute stage, and should be applied during five or six weeks in the chronic stage. It is impossible for those who are not familiar with the *modus operandi* of the action of the static current in spinal conditions to appreciate its value, and unless clinicians will investigate and see for themselves, as the writer and many others have done, the remarkable effect upon the spinal centers from the administration of the static wave current, they may otherwise continue to doubt the truths demonstrated by others. This has too often been the status of the medical mind towards the employment of the static currents. Prior to the use of the static current in the treatment of poliomyelitis the writer had demonstrated its value in the treatment of other spinal conditions, particularly of locomotor ataxia. When we use it methodically in this condition the results are remarkable and the improvement beyond conception or acceptance with those who are unfamiliar with its effects.

In spastic paraplegia, traumatic injuries of the spine, transverse myelitis, pachymeningitis, and other types of congestive statis or sclerotic processes in the spinal cord its effects have been demonstrated in the writer's experience with good results, varying as a matter of fact with the extent, or degree of chronicity of the condition.

Results with other cord cases led the writer in 1900 to adopt it in the first case of poliomyelitis which was treated by this method, at the suggestion and in the presence of one of the best clinicians in New York. A young child 13 month of age with both legs and extremities completely paralyzed, after seven weeks' treatment in a neurological clinic, was so promptly relieved of the paralysis in both legs and extremities by the application of this current to the spine that the writer was convinced of its efficiency. So much so that two weeks later he advised that a case that was referred to him by a physician living in a distant town should be treated in the same manner, which was done and with the same result. These two cases mark in the writer's experience an epoch in the treatment of poliomyelitis. Having had the opportunity in recent years of managing many cases in all stages I have verified its efficiency.

It has been often stated as an old dictum

that electricity should never be used in the acute stage of any inflammation, particularly of diseases of the spinal cord, and the heresy has become ingrafted in the medical mind, particularly with most neurologists and orthopedists. The writer, first in 1900, called attention to the fact that in any acute condition that was not malignant, pyogenic, nor tuberculous, the earlier electricity could be employed for relieving the infiltration and exudation present the more promptly would recovery take place. This applies to all conditions of myalgia, sprains, synovitis, neuritis and similar conditions. The writer has never since seen occasion to reverse the dictum, neither have those who have followed the same course, and now it is not unreasonable to state that in the early stages of poliomyelitis within the first days, as it was employed in the cases referred to, the static wave current may be applied over the spinal column with the certain assurance that the local infiltration and exudations present in the piamater and substances of the cord will be gradually removed through the lymphatic channels by the mechanical action of the current, and the pressure will be thereby relieved. This statement is made in full consciousness of the fact that the old heresy still exists in the minds of most of the profession, and with the consciousness that the view expressed may be considered the heresy. However, now the older fallacy is well proved.

If radiant light and heat and the static wave current are employed in the early stages of poliomyelitis the mortality may be materially reduced and the resulting crippledom reduced to a minimum. This is a strong statement, but it is a time for strong statements to be made in the face of the error that is allowed to prevail. The failure of men to recognize or investigate as authorities and then to employ them as they would is regretted. The indifference of the profession to the use of electricity in the treatment of inflammatory conditions as of neuritis, synovitis, myalgia and sprains, for which these measures give immediate and permanent relief, when employed in the acute conditions, is an injustice to the afflicted.

In the chronic cases of poliomyelitis the cases that come under observation, when the conditions are in a *status quo,* the treatment for the first five or six weeks would properly include the employment of the static wave current to the spine, employing a long spark-gap with the wave current. In a child five years old if the upper and lower extremities are both involved, a spark-gap one foot in length is not too long, and in an older patient, two applications should be made with electrodes, taking one-half the spine each time with a spark-gap of a length essential to obtain satisfactory results. To those who are inclined to employ the current in a gingerly, gentle style the results will be less effective. The current in its passage in and out of the body is incapable of doing harm to the patient and unless employed with the requisite energy will not produce the desired effect in removing exudations and infiltration when present.

In my own experience the static wave current gives best results when employed in chronic cases in this manner on alternate days for four to six weeks, when the effect required will have been accomplished if the current is properly applied. Following and during the static treatment the sinusoidal current should be employed as previously stated with one electrode over the spinal centers involved, and the other applied to the motor points of the respective muscles, for mild exercise, given with a current strength that will produce gentle contractions when applied to the same motor point on the unaffected side. This will gradually restore the muscle movement in the parts if the centers are not too seriously involved. Furthermore, this method will stimulate a linking of the neuromuscular mechanism with their respective centers. Experience has taught the importance of working with gentle stimulation from the centers to the motor points of these paralyzed muscles that respond. It will often be possible to gradually restore the functions and motions to the parts, when treatment is persisted in for a long period. As years advance it has been shown that improvements may continue to take place even up to maturity, parts being restored in which recovery had seemed to be impossible. Such cases under persistent treatment might have been restored earlier.

I should have observed also that in the acute condition the use of radiant light and heat and

gentle massage will do very much to prevent the atrophy of the muscles if carried out from the onset; and, though it is the rule in poliomyelitis for atrophy to occur out of proposition to disuse, when radiant light and gentle massage are employed, and the extremities kept warm the effect will be beneficial, by maintaining circulation and metabolism and thereby lessen or prevent the atrophy which would otherwise certainly follow.

The use of the high frequency current was first suggested by the writer in a paper on epidemic poliomyelitis presented before the American Electrotherapeutic Association in 1912 and published in the October number of the Journal of Advanced Therapeutics for that year. This measure has been recently referred to in a paper by Dr. A. C. Geyser, and Dr. Frederic deKraft has also reported excellent results from its employment. With radiant light and heat, the static current, the high frequency current fluids are removed from the meninges of the cord by derivation and elimination. The infiltrating exudations which are causing pressure upon the nerve filaments are thus removed and when applied before these cells have been destroyed are often capable of completely restoring the function to the corresponding parts. The possibility of destroying the germs locally present in the cord, either by an increased local phagocytosis, with the hyperemia actively induced, or by direct destruction by the application of radiant light and heat, would seem to explain the prompt recovery of the patient so treated.

Another effect accomplished by the static wave current, radiant light and heat, and the high frequency current is the restoration of active circulation and metabolism in the parts affected. This is accomplished without in any way destroying or unfavorably disturbing the parts, as has been demonstrated in the treatment of traumatic injuries to the spine and in other deep-seated inflammatory conditions.

The results outlined have been so often obtained by many observers that there should no longer be objection or opposition to the employment of the physical methods of treatment; at least a careful investigation of their merit is due the suffering victims of the disease.

THE VALUE OF SPEECH-READING FOR THE ADULT DEAF.*

By Marion A. Durfee
Providence School of Lip Reading.

I am pleased to have the opportunity of coming before you this evening to acquaint you with the value of speech-reading for the adult deaf—a work which should be of interest to the medical profession, whose aim is to restore to usefulness and happiness those handicapped by their phyical conditions. The United States has been a trifle backward in realizing this great need; and I suppose lack of support for it from the medical profession is the main reason for its slowness of progress.

In the last two or three years we have heard more of lip-reading in this country than formerly. This is due in a great measure to American interest in the Great War, for lip-reading in Europe has played an important part in refitting the deafened soldier for social service. In modern warfare permanent deafness is commonly a result of injuries to the ear. From figures available to date it has been officially estimated that 2 per cent. of the permanently disabled are so deaf that they cannot return to their former occupations. The total number of permanently disabled in all the warring nations is given as 12,000,000, and 2 per cent. of this number shows that over one-quarter of a million men are disabled through deafness alone. As a result of reports which reach us of the work done in European countries in this line of human salvage there is greater interest here than ever before. But considering the number of persons in all walks of life who suffer from some form of deafness, there are comparatively few who know what lip-reading is, what it will do, and what it will not do.

The credit of the first successful system in speech reading dates back to the year 1570. Gradually other systems were evolved until the progress in speech-reading has so advanced that now thousands of deaf pupils leave their schools equipped with the blessings of the oral methods. But, you are familiar, no doubt, with methods now used to teach

*Read before the R. I. Ophthalmological and Otological Society, January 10, 1918.

speech to children who were deaf before they have acquired ideas and the words to carry them. In learning speech through voice culture for himself, he learns to understand speech through voice manifestations in others. The main aim of this system is to teach speech.

The idea of developing a method of lip-reading for persons who had acquired speech before they became deaf did not originate until Julius Müller-Walle in 1886 developed a method especially adapted for the adult. Herr Müller-Walle realized than an entirely new system must be evolved for those persons who had acquired speech without conscious thought, as voice culture. It was only this voice culture as shown by visible movements of the lips and tongue that interested him. Accordingly Herr Müller-Walle systematized the various vowels and consonants and the visible manifestations of them. With these once learned the rest is a matter of practice.

It goes almost without saying that the ability to read the lips is a valuable possession for the adult, whether he is wholly or partially deaf. If he is only partly deaf he may so coöperate his defective hearing with what he sees in such a way that no one will be conscious of his affliction, if he is totally deaf, lip-reading is his last resort to keep in touch with his fellow-men.

With the acquisition of the art of speech-reading, he will be benefited in three ways: First, in a social way in that he will be able to take an active part in conversation; secondly, in a mental way in that he will be relieved of the nervous strain which he is ordinarily under, and this mental relief will greatly help his physical condition; thirdly, it will help him in a business way through his ability to fill positions which otherwise would be impossible. The relative importance of these three benefits will, of course, differ somewhat in persons. Men, I think, will be helped mostly in a business way, but the great difference that it will make to them in a social way should not be underestimated. Women, it seems, will feel a great relief to be able to again take part in every day affairs; and this relief will greatly help their physical condition. But in all three ways will all be benefited to a greater or less degree.

Examples of the good which is derived from the study of lip-reading may be seen on every side, and reports of these are increasingly common. Reports come from Germany that during the month of February, 1915, several classes in lip-reading were organized among the returned soldiers in Hamburg. Eighty-three were enrolled in the 9th Army Corps; after about three months of study 49 of these were discharged, as they could read the lips well enough for ordinary use—20 could not return to their former occupation. Several of these pupils, as, for instance, a law student, resumed his work, a school teacher in charge of his class; an office manager at the head once more of a large law-office, were enabled by their proficiency to return to their former field of activity.

Dr. T. W. Wood of Columbia University estimates that there are one million children with defective hearing among school children of the United States. Many of these are so deaf that they are absent-minded and extremely nervous trying to hear the teacher when spoken to. In regard to this Miss Mary McCowen, Superintendent of Public Schools for the Deaf in Chicago, states: "If such children are recommended to the teacher of lip-reading as soon as their growing deafness is discovered they could easily remain in their classes and complete their education with the hearing children with no disadvantages."

HONOR ROLL.

Capt. Howard E. Blanchard, M. R. C., U. S. A.

Lieut. Caldarone, M. R. C., U. S. A.

Lieut. Leo Cohen, M. R. C., U. S. A.

Lieut. Patrick A. Durkin, M. R. C., U. S. A.

Capt. William H. Dyer, M. R. C., U. S. A.

Lieut. Charles F. Gormley, M. R. C., U. S. A.

Lieut. Philip C. Means, M. R. C., U. S. A.

Lieut. Antonio C. Ventrone, M. R. C., U. S. A.

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society

Issued Monthly under the direction of the Publication Committee

Editorial Correspondence, Books for Review and Exchanges should be addressed to the Editor; Advertising Correspondence to the Business Manager.

Advertising matter must be received by the 15th of the month preceding date of issue.

Advertising rates furnished upon application, to the business manager, J. F. Hawkins, M.D., 114 Westminster Street, Providence, R. I.

SUBSCRIPTION PRICE, $2.00 PER ANNUM. SINGLE COPIES, 25 CENTS.

Entered at Providence, R. I. Post Office as Second-class Matter.

RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

JOHN CHAMPLIN	*President*	Westerly
GARDNER T. SWARTS	*1st Vice-President*	Providence
JOHN M. PETERS	*2d Vice-President*	Providence
JAMES W. LEECH	*Secretary*	Providence
W. A. RISK	*Treasurer*	Providence

DISTRICT SOCIETIES

KENT

Meets the second Thursday in each month

C. L. PHILLIPS	*President*	East Greenwich
L. J. A. LEGRIS	*Secretary*	Phenix

NEWPORT

Meets the third Thursday in each month

H. J. KNAPP	*President*	Newport
M. E. BALDWIN	*Secretary*	Newport

PAWTUCKET

Meets the third Thursday in each month excepting July and August

CHARLES H. HOLT	*President*	Pawtucket
EARL J. MATHEWSON	*Secretary*	Pawtucket

PROVIDENCE

Meets the first Monday in each month excepting July, August and September

FRANK E. BURDICK	*President*	Providence
CHARLES O. COOKE	*Secretary*	Providence

WASHINGTON

Meets the second Thursday in January, April, July and October

A. B. BRIGGS	*President*	Ashaway
W. A. HILLARD	*Secretary*	Westerly

WOONSOCKET

Meets the second Thursday in each month excepting July and August

W. W. BROWNE	*President*	Woonsocket
E. F. HAMLIN	*Secretary*	Slatersville

Section on Surgery—2d Wednesday in each month, Dr. F. G. Phillips, Chairman Dr. Peter P. Chase, Secretary and Treasurer.

Section on Diseases of Children—3d Tuesday in each month, Dr. Henry E. Utter, Chairman; Dr. J. S. Kelley, Secretary and Treasurer.

Section on Gynecology and Obstetrics—3d Wednesday in each month, Dr. C. W. Higgins, Chairman; Dr. E. S. Brackett, Secretary and Treasurer.

Section on Medicine—4th Tuesday in each month, Dr. D. Frank Gray, Chairman; Dr. C. W. Skelton, Secretary and Treasurer

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President, Dr. Lewis B. Porter President; Dr. H. C. Messinger, Secretary.

NOTICE

The House of Delegates having voted that the dues shall be $10.00 for 1918, the Treasurer desires to call the members' attention to Article IV Sec. 6 of the By-Laws: "Every Fellow shall annually contribute the Annual dues and the same shall be due and payable to the Treasurer, January first of each year."

EDITORIALS

R. I. P.

The action of Governor Beeckman in refusing to reappoint Dr. William L. Harris to succeed himself as a member of the State Board of Health is a direct response to the wishes of the majority of the people who have sufficiently interested themselves to become acquainted with conditions existing in the Board. His appointment under a preceding administration was based more upon a sense of personal appreciation than upon any apparent or actual qualification for the important post of health administrator. At no

time during his term did Dr. Harris have the confidence of the best element in the medical profession, and nothing that he personally has done has served to inspire that confidence.

The feeling that the valuable work of the laboratory branch of the State Board of Health was being jeopardized by his activities has been the main inspiration of the concerted action of the medical profession against his reappointment—an action which has borne fruit and which promises a far better outlook for an orderly administration of health matters in Rhode Island than if the "stormy petrel" of the State Board of health had been returned.

That the opposition to Dr. Harris's reappointment was born solely of professional jealousy, as claimed by some of his proponents, is not only false, but proven false by the protests made by organizations of a totally different character.

It is to be hoped that now the Board can give its time to consideration of its proper functions undisturbed by petty bickerings and irrelevant quarrels.

THE NEW APPOINTEE.

The appointment of Dr. Joseph M. Bennett, Providence, to succeed Dr. William L. Harris as a member of the State Board of Health, will be received with satisfaction by all who are interested in the welfare of the Board. The endorsement of Dr. Bennett by the large number of physicians who protested Dr. Harris's reappointment is an expression of their confidence in his professional ability and personal integrity—factors which will make Dr. Bennett a valuable addition to the State Board of Health. The JOURNAL extends heartiest congratulations to Dr. Bennett upon his appointment.

LESSONS OF THE HALIFAX DISASTER.

If plans now under consideration in this city are perfected, the lessons of the Halifax disaster will not be lost upon this community. Two facts stand out prominently in connection with such a calamity: (1) The lack of an organization especially conceived to handle any great emergency involving tremendous destruction of lives and property; (2) the lack of adequate supplies of all kinds. Nearly a year ago a plan was developed by a Providence physician, and supported by the National Security League, to establish in this city a medical relief organization which would be prepared to handle an overwhelming disaster such as has recently visited Halifax. Under this plan, Providence was tentatively divided into districts according to the police precincts, and two physicians were assigned to each precinct ready to answer any call of this nature. These physicians appointed assistants on whom they could call for aid at such a time. Surgical supplies and a few simple drugs were placed in the station houses to be ready when needed. These supplies had remained at the station houses until removed on the eve of the departure of the Red Cross Unit for Halifax. The large department stores were canvassed and a list was made of available cots, mattresses, blankets, sheets and towels which each store could be depended upon to supply at an instant's notice. The number of buildings which could be turned into emergency hospitals was compiled, and the local hospitals were asked to state how many patients they could accommodate in an emergency. A motor corps was organized, available railroad transportation for food and other supplies was ascertained, and the cooperation of the police commissioners and city officials obtained.

It is now proposed to incorporate this admirable plan into an effective working organization. It would seem that the Red Cross, through its Civilian Relief Committee, is the proper agency to formulate this plan and carry out this work. The state and city officials should be component parts of the organization. The local Red Cross rooms would be the logical headquarters for this emergency organization. The people naturally look to this body to assume charge of all relief work of this nature. Organization under these auspices could be speedily and effectively accomplished. A responsible head, who had been carefully selected in advance for the position, would at once take command of the situation. He would have well-trained lieutenants under him. All committees would report to him, and would receive orders from him. In this way, early organization, which is so vital to the adequate solution of the problem, would be quickly brought about.

Another phase of this problem, which would naturally come up for consideration in this

connection, is the question of a mobile or portable unit, which could be quickly transported to a neighboring city in case of disaster. This unit should consist of a small medical and surgical staff, with alternates, carefully selected for their special or general qualifications, who could be ready to move on short notice on such a relief expedition. Medical and surgical supplies for this mobile unit should be complete in character but not necessarily large in amount. They should be stored in some easily accessible place, where they could be despatched with the unit at any time. No men should belong to this unit who are already in the service of the country or who are likely to enlist in the Medical Reserve Corps.

Publicity should be given to this plan, so that the public may know what to expect in case of any great disaster. The idea is fruitful of great results, and is being carefully worked out by a committee of physicians of the Council of National Defense in conjunction with state and city officials and representatives of other organizations.

THE LABORATORY IN WAR.

Of all the measures designed to protect the soldiers of our army in their struggle against the enemies of civilization, none are more important than those which are employed to detect and check the advance of that other hostile host who fear neither bayonet nor barrage and whose stealthy progress no aerial observer can decry and no curtain of fire can halt. The bacteria of disease are to be defeated by methods no less highly specialized than are the other procedures of modern warfare, methods many of which have been modified and improved since the beginning of the present war and which demand a very perfect organization and technical training on the part of the Medical Corps and a very elaborate equipment. In this work the early recognition of cases of infectious diseases, such as epidemic meningitis and typhoid, with the identification and isolation of carriers, is perhaps the most important single task which is performed by the medical arm of the service. In doing it the bulk of the work must be carried on by men expert in bacteriology and serology working in completely equipped laboratories.

The list of diseases especially dangerous to troops and the diagnosis of which rests upon laboratory findings is a long one and includes epidemic meningitis, diphtheria, typhoid, dysentery, cholera, tuberculosis, gonorrhoea, syphilis and many others. However, the diagnosis of fully developed cases of these diseases is but a small part of the work of the laboratory. The identification of carriers is an equally important matter, for in case of many infections the prevention of an epidemic may depend upon the effective isolation of all persons harboring the organism. This phase of the work is ordinarily much the more difficult, demands as a rule far greater skill and experience on the part of the bacteriologist, and is usually a very laborious procedure. In the case of epidemic meningitis, for example, the identification of the organism in the cerebrospinal fluid of a person suffering from the disease, is a relatively simple matter, but the discovery of the carrier is an extremely difficult one. In the one case the organism is almost always in pure culture in the spinal fluid and can be stained directly. In the other it must be obtained uncontaminated by saliva from the roof of the nasopharynx by means of a sterile swab enclosed in a curved glass tube known as the "West tube;" it must be cultivated in plates of special culture media; the colonies must be carefully differentiated and "fished," and the resulting growths identified by agglutination by an immune serum. Hundreds of individuals may have to be examined in this manner before all the carriers in a given camp are found. The practitioner who is not in touch with military matters will be surprised when he learns the importance of epidemic meningitis in the present war, the havoc that it has wrought in certain of the allied forces and the extent to which the procedures just suggested are being employed in the protection of the troops at the present time.

Besides the diagnosis of infectious diseases and the identification of carriers, the laboratory has several other important functions to perform. In the field of surgery the study of wound infection is now carried on in a much more detailed and careful manner since the work of Carrel has become generally appreciated. Not only the type of infecting organ-

isms, but also the amount of degree of infection of septic wounds is investigated. Furthermore, the preparation and application of bacterial vaccines and sometimes the application of the various sera, as well as routine clinical examinations of urine, blood and feces, falls within the scope of the duties of the laboratory staff. Every facility has been provided for the carrying out of this vast amount of work. The base hospital laboratories and the division laboratories are supplied with all the necessary equipment and each is manned by a staff of experts who have been trained in the newer methods.

SOCIETIES

RHODE ISLAND MEDICAL SOCIETY.

Quarterly Meeting.

Medical Library, Dec. 6, 1917.

The meeting was called to order by the President, Dr. John Champlin, at 4 p. m.

The minutes of the September meeting and of the last meeting of the House of Delegates, at which the annual dues were increased to $10, were read and approved.

The following appointments were made by the President:

Anniversary Chairman—Dr. F. T. Rogers.

Trustee of the Rhode Island Medical Society Building—Dr. C. Grant Savage.

Delegates to State Societies: Maine—Dr. J. C. Rutherford, Dr. H. W. Kimball.

New Hampshire—Henry K. Gardiner, H. G. Partridge.

Vermont—Joseph M. Bennett, Elisha D. Clarke.

Massachusetts—Arthur T. Jones, Jesse E. Mowry.

Connecticut—F. C. Pagan, John L. May.

Program:

Paper: "Anterior Poliomyelitis, the Pathology, Indications and Treatment in the Early and Subacute Stages," Dr. William Benham Snow, Director of Physical Treatment of Poliomyelitis at Bellevue Hospital Clinic, New York.

Paper: "The Treatment of Poliomyelitis," Dr. Frank E. Peckham, Providence.

Report of meeting of the American College of Surgeons, "The Classifications of Hospitals," Dr. J. W. Keefe, Providence.

Report of meeting of State Committees, Medical Section of the Council of National Defense, Dr. A. T. Jones, Providence.

Adjourned. Collation.

J. W. Leech, M. D., *Secretary.*

Section in Medicine.

A meeting of the Section in Medicine of the Rhode Island Medical Society was held at the Medical Library, January 22, 1918, at 8:45 p. m.

Paper: "Blood Pressure," by Dr. Stephen A. Welch.

Creighton W. Skelton, M. D.,
Secretary-Treasurer.

DISTRICT SOCIETIES

Providence Medical Association.

The annual meeting of the Providence Medical Association was held at the Medical Library on January 7, 1917. The meeting was called to order by the Vice-President, Dr. William F. Flanagan, at 8:55 p. m. Dr. Flanagan announced the death of our President, Dr. F. E. Burdick, on December 26, 1917, and appointed Dr. H. G. Partridge and Dr. P. Williams a committee to draw up a memorial on the death of Dr. Burdick. There were present at the meeting 104 members and 42 guests. The records of the preceding meeting were read and approved.

The annual report of the Secretary, showing a total membership of 313 members, was read, received and ordered placed on file.

The annual report of the Treasurer, showing a balance on hand of $649.15, was read, received and ordered placed on file.

The annual report of the Standing Committee was read by the Secretary, received and ordered placed on file.

The annual report of the Reading Room Committee was read by the Chairman, Dr. George S. Mathews, received and ordered placed on file.

An outline of the President's annual address, which was found in Dr. Burdick's desk after his death, was read by Dr. H. G. Partridge.

The next order of business was the election of officers and committees for the ensuing year.

The Secretary was asked to preside, the by-laws were suspended and the Secretary instructed to cast one ballot for Dr. William F. Flanagan for President. Dr. Flanagan was declared elected and in a few well chosen words resumed charge of the meeting.

The by-laws were again suspended and the

Secretary was instructed to cast one ballot for the remaining officers and committees on the ticket. The following named officers and committees were thereupon declared elected:

Vice-President—Harry W. Kimball, M. D.

Secretary—Charles O. Cooke, M. D.

Treasurer—Winthrop A. Risk, M. D.

Member of Standing Committee for five years —P. Williams, M. D.

Trustee of the Rhode Island Medical Library Building for one year—Henry C. Hall, M. D.

Reading Room Committee — George S. Mathews, M. D., Frank T. Fulton, M. D., M. B. Milan, M. D.

Delegates to the House of Delegates of Rhode Island Medical Society—J. E. Mowry, M. D., Henry J. Hoye, M. D., D. L. Richardson, M. D., P. Williams, M. D., A. D. Rose, M. D., George R. Barden, M. D., W. H. Magill, M. D., E. S. Brackett, M. D., William Hindle, M. D., Albert H. Miller, M. D., Walter G. Sullivan, M. D., Frederic N. Brown, M. D., Harold G. Calder, M. D., Harry C. Messinger, M. D., Robert C. Robinson, M. D.

Appointment of committees by the President was deferred.

The application for membership of Dr. F. O. Balcom was read and referred to the Standing Committee.

Dr. Henry B. Moor and Dr. John H. Morrissey, having been approved by the Standing Committee, were elected members of the Association.

A resolution relative to the Single Tax, introduced by Dr. L. F. C. Garvin and seconded by Dr. Leonard, was referred to the Standing Committee with power to act.

On motion of Dr. W. A. Risk, duly seconded, it was voted the annual dues for the year 1918 be four dollars.

Dr. John W. Keefe presented a patient with stenosis of the esophagus and demonstrated the passage of an olive tipped bougie into the patient's stomach by means of a thread as a guide, which the patient had previously swallowed. He showed the X-ray films demonstrating the stricture near the cardiac end of the stomach.

Dr. Roland Hammond presented a patient who had suffered fractures of six long bones and also exhibited the X-ray plates of these fractures.

The paper of the evening, entitled "Experiences in Halifax," was read informally by Dr. N. Darrell Harvey. Dr. Harvey's talk was enthusiastically received.

Dr. G. de N. Hough of New Bedford, Mass., who was in charge of the Rhode Island unit in Halifax, supplemented Dr. Harvey's talk and paid a glowing tribute to the personnel of the Rhode Island unit.

The meeting adjourned at 11:05 p. m. A collation was served.

CHARLES O. COOKE, *Secretary.*

ANNUAL REPORT OF THE SECRETARY OF THE PROVIDENCE MEDICAL ASSOCIATION FOR THE YEAR 1917.

At the last annual meeting there were 298 members and two honorary members. During the year there have been elected 17 new members, viz.: Samuel Starr, Richard F. McCoart, John F. Kenney, James J. Baron, Lewis J. Frink, Carl R. Gross, Paul Appleton, Joseph W. Bannan, William P. Buffum, Jr., Louis J. Cella, William A. Mulvey, William F. Duffy, Frederick H. Devere, J. Edward McCabe, Jeannie O. Arnold, Mary E. Gaffney, and James P. McKenna. Three members have died, viz.: Dr. F. E. Burdick, Dr. Henry W. Burnett, and Dr. A. E. Ham. One member has been dropped for non-payment of dues. The total membership at present is as follows: 311 members and 2 honorary members.

During the year 1917, nine meetings of the association were held. The average attendance was 64 members and 3 guests. The average attendance in 1916 was 71 members and 4 guests. In other words, the attendance in 1917 averaged 7 members and 1 guest less than in 1916. The largest attendance at any meeting in 1917 was in December, when there were present 74 members and 11 guests.

Eleven papers have been presented by members, viz.: H. G. Partridge, William R. White, John W. Keefe, George A. Matteson, L. C. Kingman, C. V. Chapin, H. S. Bernstein, E. W. Burt, Charles O. Cooke, Charles A. McDonald and W. L. Chapman. Two papers have been presented by guests, Dr. James B. Ayer and Dr. William H. Smith, both of Boston, Mass. In the year 1916 fourteen papers were presented by members and three papers by guests.

During the year 1917, 49 members have taken part in the discussion of papers. This is a decided improvement over 1916, when only 29 members took part in the discussion of papers.

Aside from the reading of papers, cases have been reported by one member and specimens shown by one member. In 1916, cases were reported by two members and specimens were shown by three members.

At the June meeting, memorials were read on the deaths of Dr. A. E. Ham and Dr. H. W. Burnett.

At the November meeting, the sum of three hundred dollars was appropriated to the Rhode Island Medical Society for the use of the Medical Library for the year 1917.

At the December meeting, it was voted that members of the association in active service of the United States be excused from annual dues beginning January 1, 1918.

This report would be incomplete without referring to the members who have responded promptly and cheerfully to the call of our country for service in this great war for humanity.

The following named members are in active service of the United States Government:

Herbert H. Armington,	Harmon P. B. Jordan,
Francis H. Beckett,	John W. Keefe,
Frederick L. Blair,	Jacob S. Kelley,
Bertram H. Buxton,	George A. Matteson,
Peter P. Chase,	Marcius H. Merchant,
Anthony Corvese,	William A. Mulvey,
Murray S. Danforth,	Ira H. Noyes,
Carl R. Doten,	Walter J. O'Keefe,
George W. Gardner,	Arthur H. Ruggles,
A. Arlington Fisher,	Thomas F. Scanlon,
J. Leroy Fisher,	John W. Sweeney,
Theodore C. Hascall,	George W. Van Benschoten,
James Hamilton,	Roswell S. Wilcox.

Drs. Paul Appleton and Jay Perkins have been in service, but are now relieved.

Dr. Fred E. Webb is in service of the Canadian Government.

Twelve members are awaiting call for service with the Rhode Island Hospital Unit (Navy Base Hospital No. 4).

Many other members have received or are awaiting commissions in the Medical Reserve Corps and expect soon to be called for service.

It seems a safe prediction that in the next few months at least one quarter of the membership of this association will be in active service of the United States Government.

Respectfully submitted,

CHARLES O. COOKE, *Secretary.*

ANNUAL REPORT OF THE STANDING COMMITTEE FOR THE YEAR 1917.

The Standing Committee has held six meetings during the year 1917.

Eighteen applications for membership have been approved.

CHARLES O. COOKE, *Secretary.*

ANNUAL REPORT OF THE TREASURER OF THE PROVIDENCE MEDICAL ASSOCIATION FOR THE YEAR 1917.

Receipts.

Balance on hand January 1, 1917	$364.30
By 291 Dues at $4.00	1,164.00
Interest on Call Account	10.84
	$1,539.14

Expenses.

Donation R. I. Medical Society	$300.00
Collations	285.68
Journals	187.35
Printing and Postage	116.96
	$889.99
Receipts	$1,539.14
Expenses	889.99
	$649.15
Balance on hand January 1, 1918	$649.15

W. A. RISK, *Treasurer.*

Examined and found correct.
January 7, 1918.

For the Standing Committee,
CHARLES O. COOKE, *Secretary.*

WASHINGTON COUNTY MEDICAL SOCIETY.

The Annual Meeting of the Washington County Medical Society was held at the Colonial Club, Westerly, January 10, 1918, at 11 a. m.

The report of the Treasurer showed the society to be in a healthy condition financially—all bills paid and a balance on deposit.

A committee of three was appointed to look into the matter of lodge and contract work and report at the next meeting.

Officers for the ensuing year were elected as follows:

President—A. B. Briggs, Ashaway.

First Vice President—P. J. Manning, Wickford.

Second Vice President—H. L. Johnson, Westerly.

Secretary and Treasurer—W. A. Hillard, Westerly.

Auditor—S. C. Webster, Westerly.

Censor for Three Years—R. R. Robinson, Wakefield.

Delegate to the Rhode Island Medical Society for Two Years—H. K. Gardiner, Wakefield.

Councilor to the Rhode Island Medical Society for Two Years—F. I. Payne, Westerly.

Isaac Gerber, M. D., of Providence, addressed the meeting on "Some Aspects of Modern X-ray Treatment," following which a vote of thanks was extended.

Dr. Champlin, representing the State Council of National Defense, called attention to the need of more medical men in the Government service.

Dinner at the club followed adjournment.

Members in good standing, January 10, 1918, twenty-six.

W. A. Hillard, *Secretary.*

HOSPITALS

Rhode Island Hospital.

At the annual examination for internes, held December 8, 1917, the following appointments were made:

Dr. Alfred McAlpine, to fill a vacancy January 1, 1918.

Dr. Edward McLoughlin, to fill a vacancy April 1, 1918.

Drs. Fred. S. Thorne and Daniel Morrissey, service beginning July 1, 1918.

Dr. Lester Cleland, service beginning October 1, 1918.

Dr. Elihu Wing, who graduated January 1, 1918, is filling an appointment at the Providence Lying-In Hospital.

Dr. Harry H. Brown, Jr., who graduated January 1, 1918, has been called for duty to Camp Greenleaf, Fort Oglethorpe, Ga. He is commissioned First Lieutenant, M. R. C. Drs. Kenneth Churchill and Anderson have received similar commissions and have been called to the same place for duty.

All the members of the Rhode Island Unit to Halifax have returned.

The quarterly meeting of the Staff Association was held at the hospital on January 14, 1918. At the request of the Trustees of the hospital, a joint committee has been appointed, consisting of two members of the Board of Trustees, and the President, ex-officio, and a member from each of the Consulting, Visiting and O. P. D. Staffs. Dr. John W. Mitchell has been elected to represent the Consulting Staff, and at a meeting of the Staff Association, held at the hospital January 21, 1918, Dr. Frank T. Fulton was elected to represent the Visiting Staff, and Dr. Nat H. Gifford was elected to represent the O. P. D. Staff. This joint committee will discuss matters of hospital policy.

Providence City Hospital.

Dr. C. F. Thomson began a service as interne on December 1, 1917. Dr. S. J. Dalton began a similar service on January 1, 1918.

Dr. E. A. Barrows has finished his internship and entered the Rhode Island Hospital on January 1, 1918.

Mr. C. A. Lathrop, bacteriologist to the hospital, has enlisted in the Navy and will be attached to Base Hospital No. 4.

St. Joseph's Hospital.

An associate staff has been organized, to consist of a group of physicians who are allowed to do private work in the wards of the hospital. These men will be appointed after having made application to the hospital for such appointment in a particular department, and their work will be restricted to that department.

Dr. W. L. Chapman has been appointed to the Consulting Staff. His place as surgeon has been filled by the appointment of Dr. George R. Barden. Dr. J. E. McCabe has been made assistant surgeon to fill the place of Dr. Barden.

The following changes in the Out Patient Staff have been made: Dr. Gordon to be chief of the Surgical Department, Dr. Papavasiliou appointed to the Medical, Dr. Collins to the Children's and Dr. H. B. Moor to the Gynecological Departments.

Dr. Charles Collins and Dr. S. G. Lenzner have entered active service in the Medical Reserve Corps. Dr. Balliotti has recently received a commission as Lieutenant, M. R. C., and is awaiting orders.

A dinner of the St. Joseph's Hospital Staff Association was held January 16, 1918, at 7:30 p. m., at the rooms of the Catholic Club, Jackson street. About forty-five members and guests were present. The President of the Staff Association, Dr. Andrew J. McLaughlin, acted as toastmaster. Speeches were made by Rev. Peter E. Blessing, D. D., Secretary of the hospital corporation, on "The Relation of the Hospital to the Community"; by Thomas F. Cooney, Esq., on "The Relation of the Medical Profession to the Community," and by Maj. John W. Keefe, on "The Medical Profession of Rhode Island and the War."

THE RHODE ISLAND MEDICAL JOURNAL

The Official Organ of the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

VOLUME II
NUMBER 3
Whole No. 117

PROVIDENCE, R. I., MARCH, 1918

PER YEAR $2.00
SINGLE COPY, 25 CENTS

ORIGINAL ARTICLES

THE TREATMENT OF POLIOMYELITIS.*

By Frank E. Peckham, M. D.,
Providence, R. I.

There are two important things to consider in the treatment of poliomyelitis, the infection and the resulting paralysis. The acute onset of the infection has been attacked by various methods, but largely by those recommended by Flexner and his followers. The theory of these men is that there is a marked hyperemia of the cord and meninges and an edematous condition of the cerebro-spinal axis. In this infiltrating fluid, exists the poison, whatever its nature may be. According to Neustadter, the cellular exudate forms a sheath around the vessels and nerves at their exits and this nerve pressure produces the pain along the nerve trunks in the limbs. You are all familiar either from the literature or by actual contact with the cases, with the fact that children with the severest grades of paralysis may recover completely without any especial treatment. The result is that great care must be exercised in claiming that recoveries are due to treatment. An important thing to bear in mind, however, is that such a (spontaneous) recovery is usually very slow.

In tapping the spinal cord and withdrawing spinal fluid, it has been observed many times that there was immediate improvement in all symptoms, including the paralysis, if any existed. To have such immediate relief proves that it was due to mechanical pressure within the membrane, because when the infiltrate returns, the symptoms, including paralysis promptly returns, to be relieved by tapping and again removing the mechanical pressure. Therefore, the earlier stages of paralysis are due to mechanical pressure and not to cellular death. If due to cellular death, then there could be no spontaneous recoveries.

Another step in logical sequence as enunciated by Meltzer, is that this process which causes infiltration, exudation, and edema, is a reversible one. He has attempted to relieve the pressure by edrenalin, while to combat the poison, serum, both human and animal, has been used and many claims put forth, but so far, statistics, when carefully analyzed, have not been changed. From the Rockefeller literature, another statement should be carefully remembered, and that is that any method of treatment must be harmless in case it does not do any good. This is important because during an epidemic undoubtedly many children are taken down with a fever of more or less severity and the clinical diagnosis of poliomyelitis may be made when, in reality, it does not exist at all. I have personally seen children particularly artificially fed babies, sick with a fever, knee jerks absent, fretful and crying with pain, especially when handled or moved about, where the diagnosis of poliomyelitis was considered as probable. When the food was properly regulated, orange juice and beef juice added to the diet, I have seen such cases promptly recover, thus demonstrating that scurvy or malnutrition was the correct diagnosis and not poliomyelitis at all. In such and similar cases, if treatment for poliomyelitis is instituted, it is self evident that it ought to be harmless.

At this point, it may be well to state my convictions that notwithstanding all the laboratory tests, spinal tappings, blood and spinal fluid examinations, etc., the diagnosis of infantile paralysis is not possible until the paralysis is really present. In consequence of this, the report of cases cured in the preparalytic stage may not yet be considered a certainty although we may feel strongly regarding the diagnosis. I hope that in time laboratory tests may become absolute. The limit has apparently been reached by a recent investigator who *knows* when a given case is poliomyelitis and has the laboratory

*Read before the Rhode Island Medical Society, December 6, 1917

tests made simply to corroborate his clinical diagnosis.

Regarding treatment in the acute infiltration stage, attention was first called to the use of the static wave current by Dr. Snow, in an article which appeared in the "Journal of Advanced Therapeutics," October, 1912. The static wave current is one of the most valuable agents to dissipate infiltrates and edemas. Here the electrode would be placed over the lumbar and lower dorsal region if the legs were involved or over the upper dorsal and lower cervical region if the arms were involved. Another method to be used in conjunction is to expose the back, abdomen, and paralyzed members to the 500-candle power lamp, preferably with a blue glass screen. After a twenty minutes or half hour's exposure, the blood is drawn away from the interior, to the cutaneous vessels, thus relieving the congestion. The heat relieves the pain and the blue has a still more anesthetic effect so that the pain usually completely disappears. This is temporary but as in any method of treatment, it is the repetition which makes the relief permanent. A static machine is seldom at one's command in a hospital and never in a private house. A high candle power lamp may be used in any house with electricity. There is another method of relieving internal congestion by getting the blood to the surface in large quantities which may be used in any house. Any one who has treated cholera infantum or convulsions in babies by the hot mustard water bath, knows from experience the pink skin and the relief it almost always brings. This treatment may be used also in the acute stages of poliomyelitis when nothing else is possible. These little patients may be suffering severe pain but when carefully lifted into the bath will almost immediately be relieved and arms or legs which may have been apparently paralyzed will be moved freely as the children splash and play in the water. The skin may be gently rubbed until it is red when it may be carefully dried and the patient put back into a warm bed. This may be repeated two or three times daily but not frequently enough to produce any weakening effect. As the pain and tenderness is overcome by any or all of these treatments, gentle massage and manipulation may be employed and very much earlier than when nothing is done but wait.

Regarding the mechanical treatment, it is very important. Early in the trouble, it is comparatively easy to see what muscles or group of muscles are to be affected. These muscles must be prevented from being pulled out and stretched by strong unaffected ones. Bracing and splinting, however, must not be overdone. Removable braces are better, so that they may be omitted at the proper intervals daily, for the treatments. These methods are available until the patient can be brought to the office for more thorough attention. Here the static machine becomes of use, followed by the blue light when vibration may be applied to the weakened muscles. At this time, all pain is usually relievable so that exercises may be begun and much more rapid progress made than by waiting weeks and at times, months, for all pain and tenderness to disappear in the natural way. The sinusoidal current is also recognized as a valuable method of stimulating muscles and restoring tone. Great care must be observed in preventing overuse of the muscles. When recovery permits, a child is very apt to be too active and should be restrained rather than encouraged as this might be just the factor to prevent improvement. Any tendency to deformity, especially in the feet, should be prevented by braces even if they have to be worn for a long time.

In the terrific epidemic of 1916, when many hundreds of cases were treated by spinal tappings, by the injection of adrenalin and by the various serums, very little, if anything, was obtained in the way of results. At the meeting of the Electro-therapeutic Association in New York in 1916, there were present men who had treated hundreds of cases but who said that these methods had availed them nothing. On the other hand, there were present those who had used the methods mentioned in the first part of this paper and who were very much encouraged and even enthusiastic about the results obtained. Statistics are dangerous playthings and can be made to suit most anybody so that any method of treatment must stand or fall on its merits as established by results in an increasing number of cases. However, it would seem that the physio-therapeutic measures were physiological and that the results had been on the positive side, while the other methods, so far, have been on the negative side.

In the American Journal of Electro-therapeutics and Radiology, October, 1916, I reported a few cases treated in this way and since then, other cases have responded equally well. Instead of reporting many cases, I will mention a typical case. A baby, one year and nine months old, was brought for treatment just as soon as liberated from quarantine. The history was that the legs and muscles of the back were affected in the acute stage and at the beginning of treatment, the legs and back were useless. There was considerable tenderness when the baby was moved about. While the mother held the baby in her lap on the insulated table, the static wave current was applied to the spine for twenty minutes. The blue light was then applied to the back and extremities until the skin was pink. This was immediately followed by vibration to the muscles of the legs and simple gymnastic exercises tried each time until finally the baby could begin to make rythmic movements. The muscle power continually increased until now, (a year later), the baby walks very well. Supports are worn in the shoes, as the feet are still pronated. A removable jacket is still being worn to support the spine but may be discontinued soon. The importance of beginning work immediately can not be overestimated and then things done as fast as indicated. In all of these cases, in addition to the physical measures employed, braces have been used where indicated and always gymnastic exercises. I feel that exercise (the voluntary rythmic use of muscles) is of the utmost importance.

Many of these cases need careful and painstaking bracing after the immediate recovery to prevent deformity. In the feet in particular, there may be a permanent paralysis of a muscle or group of muscles and unless actually prevented, a so-called paralytic club foot will surely develop. The brace wearing period should extend over a period of from two to four years. The words "should extend" have been used because after that length of time, if *proper* developmental treatment has been carried out, it is probable that there will be no further improvement. At this time, surgical measures are in order to so stabilize the foot, if possible that braces may be discarded.

I now wish to describe again an original operation for stabilizing the foot and ankle. This operation was first described at the meeting of the American Orthopedic Association, May, 1917. Through a longitudinal incision, nearly the whole length of the thigh, a piece of fascia lata two to two and one-half inches wide is dissected out. In a case of paralytic talipes equino varus where the peronei and common extensor are paralyzed, an incision is made nearly the whole length of the leg. Another incision is then made through the tough fascia which surrounds the tendons. These tendons are then dissected out as low down as possible and the fascia lata placed around them in such a manner as to form a cuff, the dissected surface being placed downward. It is then thoroughly

Right foot originally a marked paralytic club foot. Photograph shows condition 16 months after operation.

sutured to the tendon, very great care being taken not to involve the annular ligament. The surrounding fascia which was split to expose the tendons and muscles is dissected back to the tibia and where it becomes practically periosteum is slightly lifted from the bone the entire length of the incision. The transplanted fascia lata which has been firmly attached to the tendon is now stitched to the edge of the periosteum on the one side, while on the other, it is stitched to the somewhat free edge of tendon and muscle

fascia. While this is done, the foot is held strongly in an overcorrected position which is perfectly retained when the operation is complete. This piece of transplanted fascia lata grows solidly to the tendon and whole length of the muscle and also to the incised fascia and to the tibia where the periosteum has been slightly lifted. This makes a perfectly solid growth several inches long and seems impossible for it ever to give way. The operation is applicable to any deformity of the foot with paralyzed muscles.

The case of a paralytic club foot which I showed in May, reported within two weeks and the photograph shows the foot now about one year and five months after operation. The girl is running about and going to school and is entirely without bracing of any kind for this foot.

Another case cannot be reported yet because the boy is just about to get on his feet after the completion of the operative work. However, you see on the screen a marked talipes equino varus in one foot and a marked talipes valgus in the other, and then in the next picture, the feet are seen in their new position.

VACCINE TREATMENT IN FIFTEEN CASES OF TYPHOID FEVER AT THE RHODE ISLAND HOSPITAL.

By Henry A. Cooke, M. D.,
Providence, R. I.

In reporting the following cases of typhoid fever at the Rhode Island Hospital treated by vaccines, I shall not attempt to go into the history of this treatment nor the methods and results of those who have used it, except very briefly. The use of vaccines in typhoid dates back as far as 1893, when it was tried by Fraenkel, but most of the work has been done fairly recently. Several types of vaccines have been used, as for example: (1) ordinary killed bacteria, (2) attenuated living bacteria, and (3) sensitized or tropinized bacteria, either living or dead. There have also been various modifications of these three types, as, for example, a sensitized vaccine from which the endotoxins have been removed.

We used on our cases first a Mulford sensitized vaccine, which had not been tried out. From this we got no reaction. We then used another Mulford vaccine which had been given with apparent good results on a private case of mine some weeks before (Case 10). This gave no result in two cases and a temporary drop with improvement in another.

In all the other cases we used the regular hospital immunizing vaccine, which is a polyvalent vaccine, containing bacilli of typhoid and also of paratyphoid A. and B., but not sensitized. The first injection was given as early as possible and in no case later than the end of the third week. All the injections were intravenous.

In every case the diagnosis of typhoid was confirmed either by the Widal test or by a blood culture, or both.

The dose of vaccine varied from 50 to 250 millions bacteria, except that case 13, a boy of 6, was given 10 millions and case 7 was given for his third dose 350 millions. This case was a very severe one and developed signs of pneumonia on the twentieth day. The rise in temperature two days previously was probably due to the onset of this pneumonia, as it came too late to be due to the vaccine treatment of the day before.

As vaccine treatment had not previously been used on this service as a routine measure, our work had to be more or less experimental, both as to dosage, number of doses and intervals. In general we carried out the following rules: (1) to give the vaccine only in cases which showed no tendency to prompt defervescence, (2) to give a rather smaller initial dose than has been advocated by others, (3) to give subsequent doses only when it was clearly evident that the preceding dose had had no effect, (4) to give the first dose of vaccine as early as possible and not later than the end of the third week.

It will be seen that we erred, if at all, on the side of over-caution. Our lack of previous experience and the fact that we did not have exactly the vaccine we wanted, i. e., one both sensitized and also deprived of its endotoxins, made it seem wise to be conservative in dosage.

The Mulford vaccines were sensitized only, and our laboratory vaccine merely a polyvalent heat-killed vaccine.

The immediate reactions were generally rather severe—a chill occurring within an hour, a rise of temperature, headache, backache and severe general malaise. Usually within twelve hours

all these symptoms had disappeared and the patient felt much better than before the injection. In the few cases where this drop was permanent the patient felt practically well thereafter.

In one case, No. 10, after the second injection, although there was slight fever for two weeks, the symptoms were very mild.

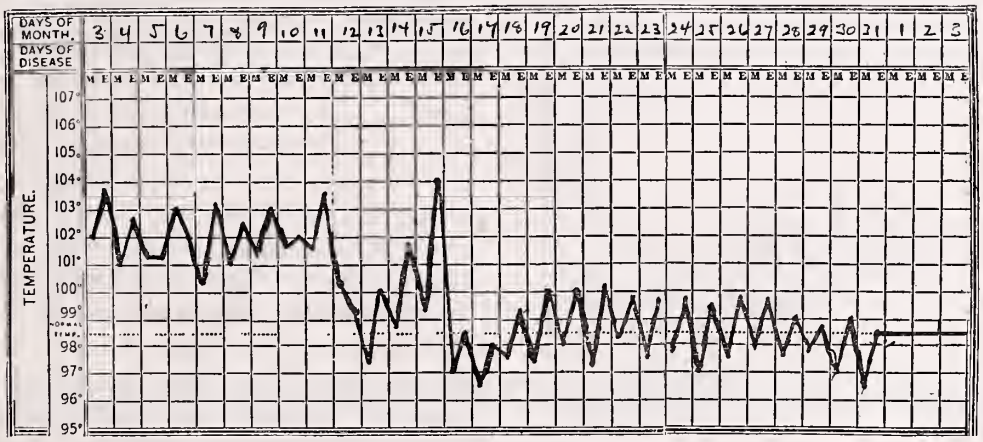
Only one case, No. 2, had a reaction that caused us any anxiety. This patient received 150 millions on the tenth day of the disease and following the injection had a severe chill, a rapid and feeble pulse, cyanosis and marked general prostration. She was given stimulation with caffeine and was all right within twelve hours, but for a time her condition was distinctly alarming. The vaccine had no apparent effect on the course of the disease.

In attempting to draw conclusions from only 15 cases, it is obvious that statistics as to mortality, duration of the disease, improvement in symptoms or development of complications, would be valueless. The mortality of the 15 cases was 20 per cent., which is about double the hospital mortality. Of the expected complications of the disease there was but one—a slight hemorrhage in one case.

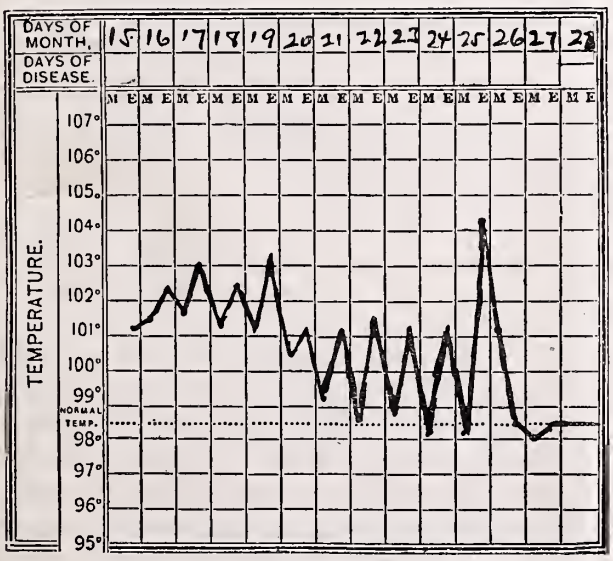
Although no statistics of value can be compiled from the cases, the charts and the individual histories have features that are at least interesting, though it would not be justifiable to draw positive conclusions from them.

Cases 1 to 5 are average typhoids. While in most instances the injections produced temporary remissions, the general course of the disease was not apparently modified.

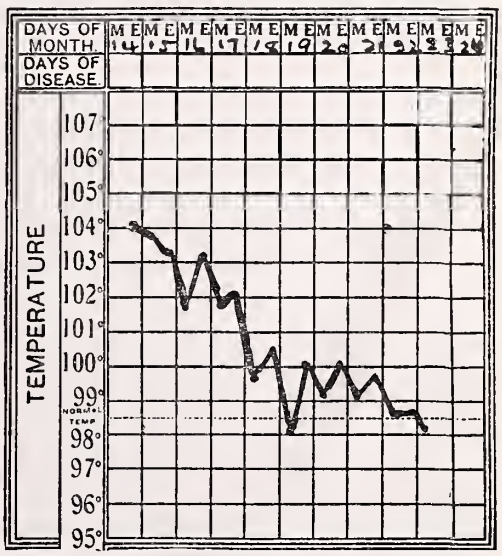
Cases 6, 7 and 8 were fatal cases; No. 7 was



No. 10

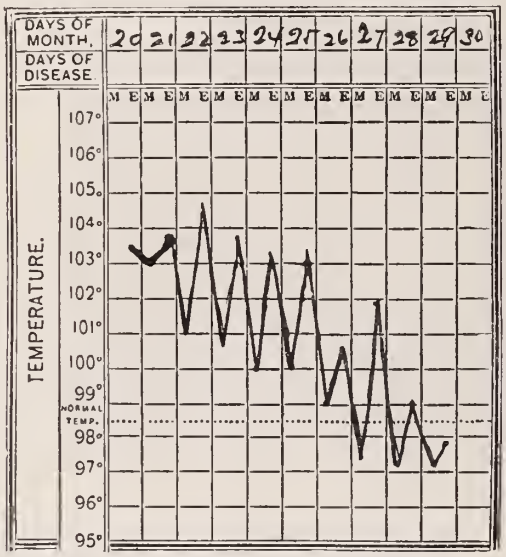


No. 11



No. 12

complicated by double pneumonia; No. 8 ran a long and severe course; No. 6 was a very severe case dying on the fifteenth day. This No. 6 was the only case in which it might seem that the vaccine had any permanent harmful effect. He died, as will be seen from the chart, on the day following his second injection. But he was very sick on admission and delirious or semi-comatose



No. 13

until his death. After his first injection he had a rise of 1° of temparature; after the second a rise of 3°, and death occurred soon after. As he got no drop in temperature and had no apparent chill, it would seem likely that the effect of the vaccine was negative, rather than actively harmful. On the other hand, it is conceivable that in a case already so toxic the vaccine might cause no reaction, but, by adding to the toxicity, might hasten death. The initial rise of temperature and the chill are apparently the systemic response to the injection. Another evidence of this response is the leucocytosis which follows the injection, a leucocytosis that ranges from 15,000 to 40,000.

Why this additional dose of vaccine with its toxins should produce an effect different from the naturally produced toxins of the disease we do not know. It may be, as some experimenters claim, that the reaction is due merely to the introduction of a foreign protein, a view that denies the specific action of the vaccine.

The charts show a number of interesting features: Taking cases 1 to 5, while they are about as long as average cases, the temperature is more irregular and following the injections, there may be a drop to a lower general level. Case 1 illustrates this, and, although after the long drop the temperature afterwards went up again, it never got back to the original high level. Case 8, one of the fatal cases, illustrates the same point. Case 9 is a rather short and mild case for one which began with severe symptoms and high temperature. Case 10 was very sick during the first period, got a temporary relief from the first injection and after the second was very comfortable for the remainder of the illness. Cases 11, 12 and 13 show a course very unusual for typhoid, and 11 shows a crisis after the third dose that cannot, I think, be attributed to anything else than the vaccine. In case 15, while the defervescence was slower, it seemed to bear a direct relation to the vaccine, as the morning and evening temperature touched normal on the fourth day following injection, though the evening temperature went up again after that. Case No. 14, after the second injection, ran a slight temperature for about three and one-half weeks. This was apparently due to the lighting up of an old tubercular lesion,—as signs were found in one lung and confirmed by X-ray.

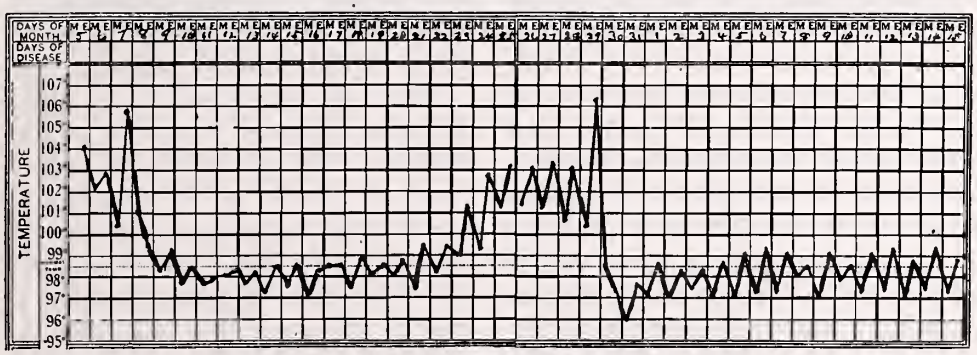
Whether cases 11, 12 and 13 would have run any different course without vaccine treatment, it is obviously impossible to say. There is a belief fairly prevalent among men who have seen a good many cases of typhoid, that short and mild cases of the disease are commoner than has been generally believed. And yet McCrae in an analysis of 1500 cases gives the average duration as 32 days, the percentage of short or abortive cases as only 3 per cent. and a critical fall of temperature in only 0.1 per cent. If these percentages hold good for typhoid in general, we have the rather remarkable fact that in these 15 cases the percentage of short or abortive cases was 20 per cent. This is, of course, within the range of mere coincidence, and yet it cannot but strengthen one's feeling that the vaccine may have been a factor in producing such results. The experience with these cases would incline me to make certain modifications of the treatment in a future series as follows: (1) Not to give the vaccine to a profoundly toxic case, even though it were seen early; (2) to give slightly larger doses, (3) to give them more frequently if the initial dose did not produce a decided and

sustained drop, (4) to use a sensitized vaccine and, if possible, one deprived of its endotoxins.

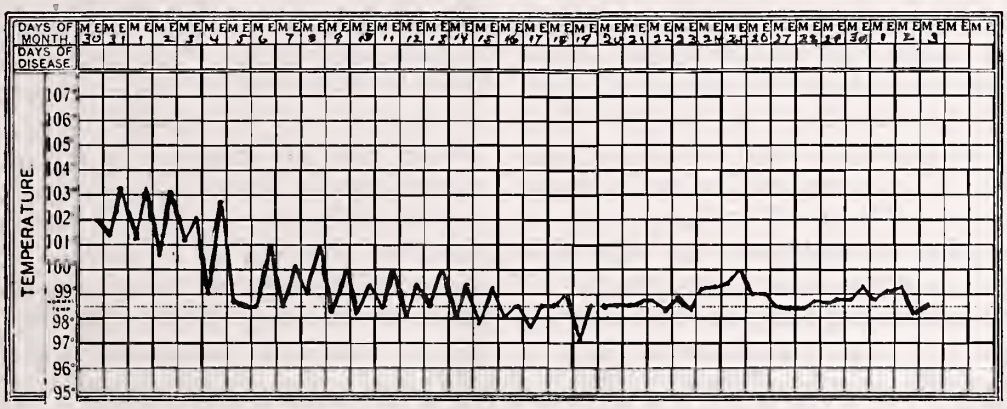
It is a question, also, whether it might not be justifiable to give it late in cases where the temperature had come to normal or nearly normal in the morning, but was up in the afternoon, such a case, for example, as No. 10. At that stage, of course, we hope from day to day that the evening temperature is going to drop and we are inclined to adopt the policy of let well enough alone. And yet if this tedious convalescence could be appreciably shortened without danger, it would be well worth the temporary discomfort of the reaction.

In trying to estimate the value of any treatment is seems to me that one cannot reason solely from the statistics or the purely scientific data. While we should have a general distrust of mere impressions as ground for belief, it is nevertheless true that our impressions may have value. They are the result of numerous more or less intangible factors which, though apparently trivial in themselves, produce in us beliefs the exact ground for which we cannot state. Such a factor in the present instance is the testimony of patients that they felt so much better after the injections—that is, after the immediate reaction had subsided.

Looking at this series of cases and comparing with it the reports of others who have used the treatment, my personal feeling is that it merits further trial.



No. 14



No. 15

CURRENT PUBLIC HEALTH LEGISLATION.*

By John G. O'Meara, M. D.,
Providence, R. I.

It might be well to preface my remarks with a few words about the Voters' League. As you perhaps well know, the Voters' League is an independent, non-partisan organization devoted solely to the cause of good government. It aims to bring about, first, the sending of high-grade men to the Legislature; second, business-like conditions in the Legislature; third, efficiency and economy in all branches of State government, and fourth, to prevent all vicious legislation and graft. Its method is wide, fearless and persistent publicity. It needs the interest, con-

*Read before the Providence Medical Association, February 5, 1918

fidence and co-operation of every citizen of Rhode Island.

Last week, through the columns of the public press, the general public was informed of the work of the first four weeks of the present session of the General Assembly. The thought occurred to me that it might be beneficial to the members of this society to be informed of current public health matters before the General Assembly or about to be presented for consideration.

First of all I shall mention the act introduced in the Senate by Mr. Aldrich of Warwick, which provides that all the manufacturing establishments in this State shall furnish fresh drinking water of good quality, to which their employees shall have access during working hours, also the use of a common drinking cup and a common towel is prohibited within this State in all factories, manufacturing or business establishments. It might be well to mention here an article in the October number of the "Bulletin of the State Board of Health" of Rhode Island, entitled "Dangerous water supply connections in manufacturing establishments," by Stephen DeM. Gage, of the laboratory staff of the State Board of Health, in which he makes mention of two instances of pollution of drinking water in manufacturing establishments in this State through a failure of connections between the industrial and drinking water systems. The first occurred in a large manufacturing plant in Providence, late in 1916, and the second instance in a manufacturing establishment in the Woonasquatucket Valley during the summer of 1917. In the latter instance forty cases of typhoid fever with four deaths followed.

In this latter instance the drinking water supply for the mill, and also for an adjacent village, was derived from a large well on the mill property. The industrial water supply was taken from the river, into which is discharged the sewage from the mill and the village, at a point only a short distance above the intake for the pumps. Every precaution had been taken by the manufacturers to protect the well from pollution, and the water as drawn from the well was of undoubted purity. There were, however, two points in the mill where the well supply was cross-connected with the river supply, to permit the river water to be pumped into the village mains in case of fire and to permit either supply to be used in the lavatories and toilets.

In summarizing, Mr. Gage has this to say: "Complete sanitary supervision, supported by comprehensive public health laws, would have prevented the instances of accidental pollution of drinking water and the subsequent epidemics which have been described above. In some States all connections between drinking water systems and water supplies for industrial and fire protection purposes are either prohibited, or are permitted only when surrounded by every safeguard which the best sanitary experts can devise."

Senate 30, Act introduced by Mr. Aldrich of Warwick, designed to protect public health, as follows: "The said commission is hereby authorized and directed, by the attending physician at any of said institutions or by such other physician as it may from time to time designate, to use every available means to ascertain the existence of any dangerous, infectious or contagious disease among the inmates, prisoners, patients and pupils of said institutions, and immediately to investigate the source of such infection, and if ascertained, to report the same to the State Board of Health. Every inmate, prisoner, patient or pupil in any of said institutions, who is afflicted with any dangerous, infectious or contagious disease, shall be forthwith placed under medical treatment, and if in the opinion of the attending physician it is necessary, shall be isolated until danger of contagion has passed or until the attending physician determines that further isolation is unnecessary; and if danger of contagion shall not have passed, or if further isolation is still necessary at the expiration of sentence or at the time for discharge or release from such institution, such afflicted inmate, prisoner, patient or pupil shall be detained in such institution and continued under medical treatment until the attending physician shall determine that his discharge or release from such institution will not endanger the public health."

The following resolution was introduced by the writer today, which provides that the Governor, with the consent and advice of the Senate, shall increase the number of State factory inspectors from four to five; the additional one shall be a qualified physician. It likewise provides that an increase shall be made in the salary of the assistant factory inspectors from fifteen hundred dollars to two thousand dollars. It might be well to mention that in the neighboring State of Massachusetts there are twenty-three factory inspectors, of whom five are physicians.

Hanson, in Roseneau's book on Preventative Medicine, has this to say: "That medical men through their training and attitude make the best factory inspectors, for they alone are in a position to make the best use of facts and learn something of the sanitary conditions of premises where men and women work, to study the possible injurious effects of certain processes, to inspect devices designed to protect the employees against injury or against dangerous fumes and dust, and to judge the effects on the health of operatives of such substances as well as to detect the symptoms of certain poisons incident to such occupations, to detect and protect the employees and others from infectious diseases, to make physical examinations of minors, and to collect and make proper use of all facts and data, including morbidity and mortality statistics pertaining to occupational hygiene." The medical inspector is also able to correlate the injurious influences in the factory, in the homes, and in the habits of the individual. Dr. Hanson has had a wealth of experience in this line, having served as factory inspector in the State of Massachusetts for a number of years, and his opinion is so valuable that in corroboration with Dr. Kober of Georgetown University Medical School he has written a book on occupational diseases.

House Bill 544, introduced by Mr. Fortin of Pawtucket, really gives a legal definition of who shall practice medicine in the State of Rhode Island, and is as follows:

"It is enacted by the General Assembly as follows:

"SECTION 1. Section 8 of Chapter 193 of the General Laws, entitled 'Of the practice of medicine,' is hereby amended so as to read as follows:

" 'SEC. 8. The holding out of oneself to the public as being engaged within this State in the business of diagnosing or treating diseases, injuries or defects of human beings, whether by the use of drugs, surgery, manipulation, electricity or through any medium whatsoever or the suggestion, recommendation or prescribing of any form of treatment for the intended pallation, relief, or cure of any person with the intention of receiving therefore, either directly or indirectly, any fee, gift, gratuity or compensation whatsoever; or the maintenance of an office for the examination or treatment of persons afflicted with disease, injury or defect of body or mind; or the using in connection with one's name the words or letters M. D., M. B., Dr., D. O., Doctor, Professor or Healer or any other title, word, letter or designation intending to imply or designate or to induce others to believe that one is engaged in the treatment or diagnosis of disease, injury, infirmity or any abnormal condition; or the professing and attempting to cure diseases of the mind or body or any other abnormal condition by electric or mechanical methods or by means of the so-called systems of "Faith-Curism," "Mind-Healing," or "Laying-On-Of Hands," shall be deemed to be the practice of medicine within the provisions of this act.'

"SEC. 2. Chapter 193 of the General Laws, entitled 'Of the practice of medicine,' is hereby amended by adding thereto the following sections:

" 'SEC. 9. Any person who, not being then lawfully authorized to engage in the practice of medicine within this State and so registered according to law, shall so engage in the practice of medicine, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not less than fifty dollars nor more than five hundred dollars or be imprisoned for not less than one month nor more than three months, or both such fine and imprisonment.

" 'SEC. 10. A physician whose certificate of qualification is not on record in the city or town in which he resides shall not be entitled to recover at law any compensation for services rendered in treating diseases for human beings.

" 'SEC. 11. For the purposes of this chapter the use by any person of any one of the above mentioned titles or the exposure of a sign, circular, advertisement or any other device indicating thereby that the person so using such title or exposing such device is engaged in the practice of medicine within the meaning of this act, shall be considered prima facie evidence that such person is or has been practicing medicine as aforesaid.'

"SEC. 3. This act shall take effect upon its passage, and all acts and parts of acts inconsistent herewith are hereby repealed."

A resolution presented today by the writer authorizes and directs the State Board of Health to make an investigation of occupational diseases. It also authorizes the State Board of Health to co-operate with the United States Public Health Service in making a proper industrial survey.

A resolution was introduced at the last session

of the General Assembly creating a joint special committee on the laws of the State relating to public health. The committee was to report February 1st, but permission was granted last week in the General Assembly to allow the committee to extend the time one month.

In relation to this resolution, the following newspaper item appeared in the public press about two weeks ago: "While no official information has been given as yet, it is believed the new act will provide for a board of health of three members, each to receive a substantial salary, and a director of the State laboratory to have full charge of both branches of the present laboratory and to be responsible to the health board. Two of the members of the board, it is proposed, shall be physicians of recognized ability and the third a man of high business standing and experience. The salaries will be placed at $4000."

In connection with the above, it might be well to mention here a report on State public health work based on the survey of State Boards of Health by Charles V. Chapin, M. D., Commissioner of Health, Providence, R. I., made under the direction of the council on health and public instruction of the American Medical Association. In summarizing on Rhode Island he says in part the following:

"A single strong executive officer is needed in every State. Among the improvements to be recommended is a requirement that the executive officer be a full time man, which should of course carry with it an adequate salary. In most of the towns, the local health work is quite inefficient, and one of the most important needs of the State department of health is a supervisor who shall instruct and direct the work of the local health officers and impress upon town officials its importance. Such a supervisor should be an expert epidemiologist."

He also makes mention that a modern water and sewage law is sorely needed, which will give the State department of health the same effective control, that obtains in many other States, over dangerous pollution.

The writer has consulted with the chairman of this committee as to the advisability of having a one-man commission, the same as New York, New Jersey, Pennsylvania, Connecticut, Massachusetts, and within the past three months Maine, that it preferably be a man from the United States Public Health Service. It is the intent of this commission to abolish the additional commissions that have to do with public health administration or reduce the personnel of the nine distinct bodies of State health administration.

Resolution providing for the appointment of a commission to investigate the use of habit-forming drugs and the effectiveness of the laws pertaining thereto:

Resolved, That a commission of three members, of whom one shall be a member of the Food and Drug Commission, another of whom shall be a physician in charge of one of the State Institutions, and another shall be the attorney general or one of his assistants, shall be appointed by the Governor to investigate the extent of the use of habit-forming drugs in this State, and the effectiveness of the laws intended to regulate and to prevent the increasing use of the same. The commission shall serve without compensation, shall have a room in the State House assigned for its use, shall give such public hearings as it may deem necessary, and may employ such assistance, clerical or otherwise, and incur such expense necessarily incidental thereto as may be approved by the Governor. The commission shall report its findings to the next session of the General Assembly, not later than February 1, 1919, with any recommendations which it may deem advisable.

The intent of this resolution is to call to the attention of the members of the General Assembly the fact that provision should be made in the not far distant future for the care, maintenance, and reclaiming by proper treatment and necessary restraint of not only the drug addicts within the confines of our State but also of the alcoholic addicts. It will not be long till public opinion will demand it. Why not anticipate this event by paving the way now?

Instead of sending this class of cases to the State Institutions at Howard, as is now the custom, it would be better by far to segregate them. Provide a separate institution for their care and treatment, as is done in other States.

Both classes are with us in considerable numbers, and surely it is worth while to make an effort to reclaim as many as possible. Since the adoption of the Federal anti-narcotic law, commonly spoken of as the Harrison law, the columns of the newspapers have apprised us of the prevalence of the drug habit.

Within recent months a Providence druggist

and a Providence physician were arrested and convicted for breaking the Harrison law. A little later a drug victim died at the State Institutions at Howard, undoubtedly from being deprived of his usual portion or daily amount, and within a month or two another Providence physician was deprived of his right to practice medicine in this State because of some infraction of the Harrison law. On Tuesday, January 22, a Providence druggist pleaded nolo before Judge Brown in United States District Court and was fined $250, $150 and $50 on three indictments of selling narcotics. All of which lead up to the fact that while the operations of the Federal law and anti-narcotic laws as adopted by some of the different States has enabled a more active campaign to be waged against this evil, and has to some extent been effective in minimizing it, nevertheless we are confronted by the situation that no provision is made for the cure of drug habitues, who are liable to become a miserable and a dangerous class of derelicts in the community. The drug addicts, in common with the alcoholic addicts, deserve control, treatment and restoration to health, as much as any other group of unfortunate patients.

Two years ago the General Court of Massachusetts appointed a special commission, consisting of Dr. Frank G. Wheatley, chairman, a trustee of the Massachusetts School for Feebleminded at Waverly; Mr. Herman Lithgoe, of the Food and Drug Division of the Massachusetts State Board of Health, and Mr. A. C. Webber, assistant district attorney. For six months this commission pursued its investigations, and on January 4, 1917, returned its report to the Legislature. In summarizing, the commission pointed out that the present drug laws are insufficient and should be strengthened as follows:

"1. They are not easily understood and are capable of misinterpretation. The words 'obviously needed for therapeutic purposes' should be further defined.

"2. Enforcement of the laws should be made more certain by the adoption of simplified pleading forms.

"3. The penalties for violations of the law are inadequate and should be increased, and new offenses defined.

"4. Places resorted to by drug addicts should be declared and treated as common nuisances, and the police authorities should be given the right to arrest without warrant in certain cases.

"5. The hypodermic syringe and needle should be kept from the addict and the sale of these instruments regulated.

"6. The boards of registration in medicine, dentistry, pharmacy and veterinary medicine should be given broader powers to cancel and revoke registrations and licenses.

"7. The State department of health should be empowered to make rules and regulations for the distribution of narcotic drugs through druggists.

"8. Private hospitals and sanatoria should be specially licensed and subject to rigid inspection.

"9. Provision should be made for institutional treatment and care of non-criminal addicts.

"10. Additional provision should be made for the collection of statistics as to the extent of the use of narcotic drugs in the commonwealth."

It is estimated that there are 60,000 drug habitues in the State of Massachusetts and between one and two million habitual narcotic drug users in the United States. The report cites the case of a physician in Boston who wrote eight hundred prescriptions for narcotic drugs at a fee of $2 apiece. A second physician, in three months time wrote a thousand such prescriptions for drug addicts. In a third case there were found in a single Boston drug store 4055 narcotic drug prescriptions issued by one physician between May and September, 1916.

Since the return of the report quoted above the Legislature of Massachusetts has enacted an anti-narcotic drug law. Provision has been made for the care and treatment of non-criminal drug addicts and also for alcoholic addicts by the erection of a splendid group of buildings in Norfolk County on the state road between Wrentham and Walpole. In Pennsylvania a commission was appointed by the governor to select a site and erect a state hospital for the treatment of inebriates. The legislature has appropriated $200,000 for this work. Our responsibilities are just as great as those of our neighbors to the north of us and we should be alive to them. If one were to get an expression of opinion from members of the medical, or of the legal profession, or from justices of the courts, or from the police officials of the different cities and towns within the confines of our state, as to the necessity of segregating these individuals in a separate institution, each and every one would unqualifiedly approve of some movement being made in that direction.

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society

Issued Monthly under the direction of the Publication Committee

Editorial Correspondence, Books for Review and Exchanges should be addressed to the Editor; Advertising Correspondence to the Business Manager.

Advertising matter must be received by the 15th of the month preceding date of issue.

Advertising rates furnished upon application, to the business manager, J. F. Hawkins, M.D., 114 Westminster Street, Providence, R. I.

SUBSCRIPTION PRICE, $2.00 PER ANNUM. SINGLE COPIES, 25 CENTS.
Entered at Providence, R. I. Post Office as Second-class Matter.

RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

JOHN CHAMPLIN	*President*	Westerly
GARDNER T. SWARTS	*1st Vice-President*	Providence
JOHN M. PETERS	*2d Vice-President*	Providence
JAMES W. LEECH	*Secretary*	Providence
W. A. RISK	*Treasurer*	Providence

DISTRICT SOCIETIES

KENT
Meets the second Thursday in each month

H. BARTON BRYER	*President*	Natick
JAMES M. BODWELL	*Secretary*	Phenix

NEWPORT
Meets the third Thursday in each month

_____	*President*	Newport
_____	*Secretary*	Newport

PAWTUCKET
Meets the third Thursday in each month excepting July and August

CHARLES H. HOLT	*President*	Pawtucket
EARL J. MATHEWSON	*Secretary*	Pawtucket

PROVIDENCE
Meets the first Monday in each month excepting July, August and September

WILLIAM F. FLANAGAN	*President*	Providence
CHARLES O. COOKE	*Secretary*	Providence

WASHINGTON
Meets the second Thursday in January, April, July and October

A. B. BRIGGS	*President*	Ashaway
W. A. HILLARD	*Secretary*	Westerly

WOONSOCKET
Meets the second Thursday in each month excepting July and August

_____	*President*	Woonsocket
E. F. HAMLIN	*Secretary*	Slatersville

Section on Surgery—2d Wednesday in each month, Dr. F. G. Phillips, Chairman Dr. Peter P. Chase, Secretary and Treasurer.

Section on Diseases of Children—3d Tuesday in each month, Dr. Henry E. Utter, Chairman; Dr. J. S. Kelley, Secretary and Treasurer.

Section on Gynecology and Obstetrics—3d Wednesday in each month, Dr. C. W. Higgins, Chairman; Dr. E. S. Brackett, Secretary and Treasurer.

Section on Medicine—4th Tuesday in each month, Dr. D. Frank Gray, Chairman; Dr. C. W. Skelton, Secretary and Treasurer

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President, Dr. Harlan P. Abbott, President; Dr. C. J. Astle, Secretary-Treasurer.

NOTICE

The House of Delegates having voted that the dues shall be $10.00 for 1918, the Treasurer desires to call the members' attention to Article IV Sec. 6 of the By-Laws: "Every Fellow shall annually contribute the Annual dues and the same shall be due and payable to the Treasurer, January first of each year."

EDITORIALS

CURRENT PUBLIC HEALTH LEGISLATION.

Every physician in the state should be interested in the review of current public health legislation which appears in this issue. The bills are all important and deserve to be placed on our statute books. The proposed amendment of the law defining the practice of medicine is so significant and far-reaching that it is printed in full for the benefit of our readers. It strikes at a group of irregular practitioners who have long played upon the susceptibilities of a certain

class of the public. Many of the patients are poor and ignorant, and thereby excusable for their blinding faith in the methods of the charlatan, but a large number are of the wealthy and intelligent class, whose opportunities should lead them to seek medical advice in more reliable quarters. The medical profession of the state should unite in supporting this bill, which is a distinct advance in our efforts to protect the public against unscrupulous healers. We recommend a careful perusal of Section 10. Every physician should at once ascertain if his certificate of qualification to practice medicine is on record with the clerk of the city or town in which he resides. Otherwise his rights at law are forfeited, if this bill should become a law.

The need of more stringent laws regarding the use of narcotics has been recognized since the passage of the Harrison law has brought to our attention the enormous traffic in these drugs. The Massachusetts commission appointed to investigate this subject has arrived at some very definite conclusions regarding the abuse of narcotic drugs, and has made some very helpful recommendations for changes in existing laws. Conditions will probably be found to be no better here than in our neighboring states, and very likely worse. Rhode Island has too long enjoyed the reputation of being the Mecca of this class of human derelicts, who have found the atmosphere of nearby states uncongenial. The lack of a proper institution to care for this class of unfortunates has hindered a proper solution of our local problem.

It is encouraging that the medical profession is becoming interested in public health laws which are introduced in our legislative bodies, and in the officials who shall administer them. It is a sign of the times to find a legislator from the ranks of the medical profession who is more interested in securing the passage of effective public health legislation than in playing petty party politics.

A HEALTH COMMISSION.

A committee from the Legislature has been considering for several months the question of reorganization and consolidation of the many and varied aspects of health administration with a view of bringing them into a more closely-knit and co-ordinated fabric than now exists. If report is true, this committee is in favor of a commission composed of two physicians and one business man—at a salary of $4,000 apiece. When asked by a physician why a single commissioner, such as Pennsylvania, Massachusetts, and New York have, was not favored, one of the members with a logic quite compatible with much of the cerebration displayed in our Legislature explained that the state was "too small for that sort of thing." Whatever other suggestions may be made on this subject, we can see nothing to be gained by displacing an unpaid Board of Health of seven men by a three-man commission which will cost the taxpayers of Rhode Island $12,000 a year. We look with confidence for Governor Beeckman to give point to his oft-expressed disapproval of increasing the number of paid commissioners in the state by rejecting any such expensive and inefficient method of health administration.

As we have explained in these columns before, we believe the affairs of health and germane subjects should be invested in one responsible head and that he should be a trained sanitarian such as the United States Public Health Service sends out through the country in normal times. Massachusetts has such a man on a five years' lease of absence from the United States Public Health Service. In view of the needs of the Nation for all of its trained personnel for the prosecution of the war, it is doubtful whether it would be possible at this time to get a man from this branch of the National service. It should, therefore, be far better to defer any change short of this desirable arrangement than to exchange a board of voluntary membership for one half as large and enormously more expensive.

This is too serious a matter to be decided without a most searching study of all its phases and certainly the medical profession should be called upon to give to the Legislative Committee its views and feelings on the subject. It is to be hoped that a public hearing will be held by the committee before it presents its final report to the Legislature in March.

FOR THE MEN IN SERVICE.

When the Rhode Island Medical Society, at a meeting held more than six months ago, passed

a resolution by which its members bound themselves to turn over to every colleague who entered the service of the country fifty per cent. of the fees collected during his absence from such patients as considered him as their "regular" or "family" physician, the Society did itself credit only in so far as its members were sincere in their resolve to live up to the spirit of the resolution. It appears that several men, fairly busy practitioners when at home, who have been in military or naval service for six months or more, have not as yet received from their home-staying colleagues, who so generously have promised to care for their interests, even the price of a postage stamp. Possibly credits have been kept on the books of the physicians who have been attending their patients and payment will be made later on. At any rate it is not inappropriate for the Journal to remind the physicians of the state that we have laid upon ourselves the moral responsibility of living up to the spirit of our resolution if it is to be adjudged more than mere empty boast and bombast and if all of us are to avoid having our names coupled with that new and very ugly word "profiteer."

ACCIDENTS FROM LOCAL ANESTHETICS.

The attention of all readers is directed to the communication on another page of this issue regarding accidents occurring from the use of local anesthetics. For the protection of the public, these accidents should be reported. It is evident that these convenient drugs have achieved a wide popularity, and it is now apparent that they are not all safe in the doses in which we have been accustomed to use them. The suggestions advocated in this letter are a protection both to the patient and to the physician.

SOCIETIES

DISTRICT SOCIETIES.

Providence Medical Association.

February 5, 1918.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library on Tuesday, February 5, 1918. The meeting was called to order by the President, Dr. William F. Flanagan, at 9 p. m. There were present at the meeting 33 members. On motion of Dr. C. O. Cooke, duly seconded, it was voted that the by-laws be suspended and that the meetings in February and March be held on the first Tuesday instead of the first Monday. The records of the preceding meeting were read and approved. The President announced the appointment of committees for the year 1918, as follows:

Collation Committee—Dr. George F. Johnson and Dr. Raymond G. Bugbee.

Publicity Committee—Dr. Roland Hammond, Dr. M. B. Milan and Dr. W. J. McCaw.

The records of the last meeting of the Standing Committee were read.

The first paper of the evening, entitled, "Experiences at Camp Hancock," was read informally by Dr. Jay Perkins. This paper was discussed by Dr. William R. White and Dr. John M. Peters.

The second paper, entitled, "Early Signs in Diseases of the Upper Abdomen," was read by Dr. John B. McKenna. This paper was discussed by Dr. C. O. Cooke, Dr. J. Edwards Kerney and Dr. J. H. Haberlin.

Dr. John G. O'Meara, a Representative in the Rhode Island Assembly, called attention to acts relative to the public health, which are being considered by the Assembly.

On motion of Dr. O'Meara, duly seconded, it was voted that the Secretary be instructed to communicate with Senator Henry B. Kane, Chairman of the Joint Special Committee on Revision of the Laws of the State Relative to Public Health, asking for a public hearing on the matter of a Public Health Commission.

On motion of Dr. H. W. Kimball, duly seconded, it was voted, that if the hearing be granted, the President should appoint a committee of five to represent the Association at the hearing.

On motion of Dr. William R. White, duly seconded, the meeting adjourned at 10:53 p. m. A collation was served.

Charles O. Cooke, *Secretary*.

Kent County District Society.

The Kent County Medical Society held a meeting, December 13, 1917, at West Greenwich, R. I. The following officers were elected: President, Dr. H. Barton Bryer; Vice-President, Dr. Louis J. A. Legris; Secretary, Dr. James M.

Bodwell; Treasurer, Dr. Frank B. Smith; Delegate to the House of Delegates of the Rhode Island Medical Society, Dr. B. F. Tefft; Councillor, Dr. Ira Hasbrouck; Censor, Dr. Graydon B. Smith.

The regular meeting of the Kent County Medical Society was held in the Nurses' Association rooms at Riverpoint, R. I., January 10, 1918. Address by Dr. Frederick V. Hussey of Providence, R. I., on his experiences at Halifax, N. S. A case of pellagra was reported by Dr. H. Barton Bryer of Natick, R. I.

JAMES M. BODWELL, *Secretary.*

WOONSOCKET DISTRICT SOCIETY.

The regular monthly meeting of the Woonsocket District Society was held at the St. James Hotel, Woonsocket, January 17, 1918. Owing to the illness of the President, Dr. W. W. Browne, the First Vice-President, Dr. E. L. Myers, occupied the chair.

Dr. J. H. Gallison of Boston read a very interesting paper on "The Commoner Diseases of the Rectum and Anus with Diagnosis and Treatment."

It was voted to hold the next meeting February 21, 1918, at 8:30 p. m.

E. F. HAMLIN, *Secretary.*

HOSPITALS

RHODE ISLAND HOSPITAL.

The Clinic Day and Annual Banquet of the Rhode Island Hospital Club will be held February 26, 1918. Dr. Charles L. Scudder of Boston will conduct a surgical clinic at the Hospital in the morning, and Dr. William H. Smith of Boston will conduct a medical clinic at the Hospital in the afternoon. The banquet will be held at the Turks Head Club in the evening.

Dr. Harry D Clough, who has a lieutenant's commission M. R. C., has been called for military duty at Lakewood, New Jersey.

Dr. George A. Rice, who has a lieutenant's commission, M. R. C., has been ordered to report at Garden City, New York, in the Aviation Signal Corps.

The following additional internes have received commissions in the M. R. C.:—Drs. Thomas C. Wyman, Walter W. Street, Charles L. Lynch, John T. Burns, Nat. H. Copenhaver, Henry J. Gallagher.

PROVIDENCE CITY HOSPITAL.

Dr. Joseph L. Belliotti began service February 1.

Dr. Stephen J. Dalton began service January 1.

Dr. Stephen J. Dalton and Dr. Joseph L. Belliotti have accepted commissions in the Medical Reserve Corps.

MEMORIAL HOSPITAL.

The annual meeting of the Staff Association was held January 29, 1918, in the out-patient building, the President, Dr. Frederick V. Hussey, presiding. The following officers were elected for the ensuing year: President, Dr. Arthur T. Jones; Vice-President, Dr. Roland Hammond; Secretary, Dr. John F. Kenney; Treasurer, Dr. Lamert Oulton.

Dr. Charles L. Scudder of Boston addressed the Association on the training of medical officers at the Massachusetts General Hospital, on the relation of surgical shock to fractures of the long bones and on recent ideas regarding gastric ulcer. Discussion followed by Drs. Keefe, E. B. Smith, Hussey, Matteson, Miller, DeWolf, H. A. Cooke, Burgess, Chase, Towle, Hammond, Sweet and Kingman.

ST. JOSEPH'S HOSPITAL.

Regular meeting of the Staff Association was held February 8, 1918, at 9 p. m.

Paper: "Cerebro-Spinal Meningitis," by Dr. William H. Jordan.

MISCELLANEOUS

Dr. W. W. Browne, President of the Woonsocket District Society, died January 28, 1918, at his home, after a protracted illness.

Dr. Mary E. Baldwin, Secretary of the Newport District Society, died in Brooklyn, N. Y., November 21, 1917.

Dr. N. Darrell Harvey has returned from a ten days' trip to Halifax, N. S., where he went as a consultant in cases of eye injuries at the request of the Relief Committee of the Dominion Government of Canada.

Drs. George A. Matteson and Halsey DeWolf have returned from a few days' trip to Washington.

Dr. Frederick T. Rogers is enjoying an automobile trip in Florida.

LETTER TO THE EDITOR.

REPORTING OF ACCIDENTS FROM LOCAL ANESTHETICS.

To the Editor: The Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association has undertaken a study of the accidents following the clinical use of local anesthetics, especially

those following ordinary therapeutic doses. It is hoped that this study may lead to a better understanding of the cause of such accidents, and consequently to methods of avoiding them, or, at least, of treating them successfully when they occur.

It is becoming apparent that several of the local anesthetics, if not all of those in general use, are prone to cause death or symptoms of severe poisoning in a small percentage of those cases in which the dose used has been hitherto considered quite safe.

The infrequent occurrence of these accidents and their production by relatively small doses point to a peculiar hypersensitiveness on the part of those in whom the accidents occur. The data necessary for a study of these accidents are at present wholly insufficient, especially since the symptoms described in most of the cases are quite different from those commonly observed in animals even after the administration of toxic, but not fatal, doses.

Such accidents are seldom reported in detail in the medical literature, partly because physicians and dentists fear that they may be held to blame should they report them, partly, perhaps, because they have failed to appreciate the importance of the matter from the standpoint of the protection of the public.

It is evident that a broader view should prevail, and that physicians should be informed regarding the conditions under which such accidents occur in order that they may be avoided. It is also evident that the best protection against such unjust accusations, and the best means of preventing such accidents consist in the publication of careful detailed records when they have occurred, with the attending circumstances. These should be reported in the medical or dental journals when possible; but when, for any reason, this seems undesirable, a confidential report may be filed with Dr. R. A. Hatcher, 414 East Twenty-sixth street, New York city, who has been appointed by the committee to collect this information.

If desired, such reports will be considered strictly confidential so far as the name of the patient and that of the medical attendant are concerned and such information will be used solely as a means of studying the problem of toxicity of this class of agents, unless permission is given to use the name.

All available facts, both public and private, should be included in these reports, but the following data are especially to be desired in those cases in which more detailed reports cannot be made:

The age, sex, and general history of the patient should be given in as great detail as possible. The state of the nervous system appears to be of especial importance. The dosage employed should be stated as accurately as possible; also the concentration of the solution employed, the site of the injection (whether intramuscular, perineural or strictly subcutaneous), and whether applied to the mouth, nose, or other part of the body. The possibility of an injection having been made into a small vein during intramuscular injection or into the gums should be considered. In such cases the action begins almost at once, that is, within a few seconds.

The previous condition of the heart and respiration should be reported if possible; and, of course, the effects of the drug on the heart and respiration, as well as the duration of the symptoms, should be recorded. If antidotes are employed, their nature and dosage should be stated, together with the character and time of appearance of the effects induced by the antidotes. It is important to state whether antidotes were administered orally, or by subcutaneous, intramuscular or intravenous injection, and the concentration in which such antidotes were used.

While such detailed information, together with any other available data, are desirable, it is not to be understood that the inability to supply such details should prevent the publication of reports of poisoning, however meager the data, so long as accuracy is observed.

The committee urges on all anesthetists, surgeons, physicians and dentists the making of such reports as a public duty; it asks that they read this appeal with especial attention of the character of observations desired.

TORALD SOLLMANN, *Chairman,*
R. A. HATCHER, *Special Referee,*
Therapeutic Research Committee of the Council on Pharmacy and Chemistry of the American Medical Association.

HONOR ROLL.

Lieut. Arthur A. Anderson, M. R. C., U. S. A.
Lieut. Joseph L. Belliotti, M. R. C., U. S. A.
Lieut. Henry H. Brown, Jr., M. R. C., U. S. A.
Lieut. John T. Burns, M. R. C., U. S. A.
Lieut. Kenneth Churchill, M. R. C., U. S. A.
Lieut. Harry D. Clough, M. R. C., U. S. A.
Lieut. Nat. H. Copenhaver, M. R. C., U. S. A.
Lieut. William W. Cummings, M. R. C., U. S. A.
Lieut. Stephen J. Dalton, M. R. C., U. S. A.
Lieut. Joseph L. Dowling, M. R. C., U. S. A.
Lieut. Henry J. Gallagher, M. R. C., U. S. A.
Lieut. Leon S. Gilpatrick, M. R. C., U. S. A.
Lieut. Tancredi G. Granata, M. R. C., U. S. A.
Capt. Joseph F. Hawkins, M. R. C., U. S. A.
Lieut. John F. Kenney, M. R. C., U. S. A.
Lieut. Charles L. Lynch, M. R. C., U. S. A.
Capt. Charles F. Perry, M. R. C., U. S. A.
Lieut. George A. Rice, M. R. C., U. S. A.
Capt. Arthur N. Stevenson, M. R. C., U. S. A.
Lieut. Walter W. Street, M. R. C., U. S. A.
Capt. Fenwick G. Taggart, M. R. C., U. S. A.
Lieut. Thomas C. Wyman, M. R. C., U. S. A.

THE RHODE ISLAND MEDICAL JOURNAL

The Official Organ of the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

VOLUME II
NUMBER 4
Whole No. 118
PROVIDENCE, R. I., APRIL, 1918
PER YEAR $2.00
SINGLE COPY, 25 CENTS

ORIGINAL ARTICLES

EARLY SIGNS IN DISEASES OF THE UPPER ABDOMEN.*

By John B. McKenna, M. D.,
East Providence, R. I.

During the past decade there has been a considerable amount of important literature presented to us on the diagnosis of diseases within the abdomen, and, therefore, a communication on the early signs of diseases in the upper abdomen must, of necessity, cover ground well known to the members of this Society.

In the presentation of this paper there is no thought of having anything new to offer in diagnosis; the purpose is rather to stimulate a more thoughtful consideration of histories, to the end that proper treatment may be instituted before irreparable damage is done through the continued existence of pathological conditions.

In the upper abdomen pathological conditions are always more or less grave, and there is, probably, no other region of the body in which delay in proper treatment is attended by more serious consequences.

Because of the close relationship, anatomically and physiologically, of the organs occupying this region, it is not at all surprising that there should exist difficulties in the diagnosis of pathological conditions in the early stages of the processes.

We all know from experience how often disease of one organ of this part of the body presents symptoms referred to one or more of the others, or, in fact, to any part of the intestinal tract, often tempting us to consider the condition a neurosis due to something or nothing.

Our success in overcoming the difficulties of arriving at an early diagnosis lies in the appreciation of careful history taking. Close attention to minor points with due consideration of their proper relations to other facts may prove to be of the greatest value in solving these complex problems.

It is, perhaps, not too bold to assert that, most of us, at some time or other, have been guilty of a "snap diagnosis." With a preconceived idea of the case, the disposition is strong to make the patient's story fit the diagnosis. In the desire to get at classical symptoms we may cause the patient either to forget or to neglect to give us facts, seemingly trivial, but which might be most valuable. In our zeal to obtain a careful history, we must be on our guard lest the patient be led to give answers apparently wanted, always bearing in mind that a leading question may, perchance, become a very misleading one.

The grave consequences of delayed diagnosis in cancer of the stomach is too frequently seen at the operating table. Even to-day we are taught that the symptoms of gastric cancer are vomiting of retained food, tumor, hemorrhage and cachexia. Crile calls these the terminal symptoms, indicating that surgical opportunity is forever lost.

The belief generally held to-day is that most patients with gastric cancer have had a gastric ulcer, and, if this be true, have we not the danger signal flashed before us when a patient in middle life, whose previous history points to chronic ulcer, develops marked symptoms and begins to complain of loss of flesh and strength with pain at the epigastrium?

It is but too true to say that the diagnosis of cancer of the stomach in the incipient stage is an impossibility; but it is far better to operate where the diagnosis is uncertain than to wait for signs that mark lost opportunity.

Because of the resulting deformities, the permanent crippling of the stomach, the interference with digestion and motility, and the ever present danger of cancerous development, gastric ulcer, next to gastric cancer, is followed by the gravest of consequences.

When a patient presents himself with a history of persistent and troublesome dyspepsia, his case should not hastily be put in the category of the

*Read before the Providence Medical Association, February 5, 1918.

neuroses, for we have here a condition which should arouse a suspicion of chronic ulcer.

In gastric ulcer, anorexia or at times a capricious appetite is very common, and as a consequence of the inability to absorb food, emaciation may be noted. There is pain at the pit of the stomach, usually aggravated by the ingestion of food. Vomiting is rare, unless partial stenosis has resulted. Blood may be discovered by the occult test. Given these symptoms, why wait for a violent hemorrhage, or a distinct tenderness or even a perforation to make known the true state of affairs?

Ulcer of the duodenum presents symptoms very similar to those of ulcer of the stomach. The pain, however, usually comes on at a later period after the ingestion of food, being more marked when the stomach is empty. This is the "hunger pain" of Robson. The patient, although not aware of the cause of his desire to keep something in the stomach, will tell us that he rests better at night if some food is taken before retiring. Vomiting of food or of blood is of rare occurrence, but tenderness and rigidity are early signs.

Of all the pathological conditions in this region, cholelithiasis furnishes the most frequent examples of delayed diagnosis. Although the condition has been observed for centuries, yet the symptomatology given in the text-books of the present day is not that of the presence of stones, but of impaction or of cholangitis. A history of a long standing dyspepsia with flatulence and constipation should direct our attention to the gall-bladder. Patients with gallstones almost invariably refer their trouble to their stomachs, laying much emphasis on attacks of "biliousness" or of "indigestion." A characteristic feature of these cases is a sense of tightness or fullness in the upper abdomen from which relief is sought by loosening the clothing at the waist. If these cases are not properly diagnosed, the constriction becomes an acute pain which leaves a soreness in the right side, and as time goes on there is, eventually, the occurrence of the unmistakable biliary colic. Occasionally associated with the pain and discomfort there is a sensation of chilliness which is looked upon as quite characteristic. If the significance of the so-called bilious attacks, the sense of fullness and the chilly sensations are kept in mind, the diagnosis of gallstones in the early stage will be more frequently made. Some one has said that the majority of flatulent women who attend the out-patient clinics with such wonderous regularity to receive their weekly bottles of medicine are really suffering from the presence of gallstones. Deaver says that among the wealthier classes there is a large number in whom the so-called latent gallstones are trying in a thousand ways to make their presence known.

The differential diagnosis of all the surgical diseases of the upper abdomen in the early stages is always a difficult problem. Thus, early in ulcer of the stomach and duodenum, and in gallstones, dyspepsia is common to all. In gallstones there is discomfort, hardly a real pain, which is usually relieved by the eructation of gas, and while the appetite is good, the patient fears to eat lest he bring on an attack of so-called indigestion. A patient with gastric ulcer, on the contrary, has more or less anorexia with loss of flesh. Vomiting is more frequently noted in gastric and duodenal ulcer; in gallstones vomiting is usually a late symptom associated with frank biliary colic. Pain in gastric and duodenal ulcer is more or less acute and dependent upon the ingestion of food; in gallstones there is the sense of constriction with the characteristic sensation of chilliness. In ulcer, tenderness when present is at the middle or slightly to the left, while in gallstones is made manifest by deep pressure under the right costal margin.

In chronic pancreatitis we have very little data to aid us in making a diagnosis at any stage, and yet, on account of the possibility of the occurrence of cancerous development or a fatal diabetes as the result of chronic pancretitis, an early diagnosis would be of inestimable benefit to the patient.

The Cammidge reaction, considered of some value, is not always reliable. Alternating periods of dyspepsia and apparent good health, associated with occasional attacks of pain in the left upper abdomen, alternating diarrhoea and constipation and the discovery of undigested fat in the feces, should direct attention to the pancreas. The occurrence of sudden excruciating epigastric pain, followed by vomiting and ghastly cyanosis, plainly spells acute pancreatitis.

Admitting that a differential diagnosis is oftentimes a perplexing problem in diseases of the upper abdomen, it must be remembered that the treatment of all the conditions is the same—operation—and the very factor that leads to this difficulty in differentiation, namely, the close

anatomical relations of the organs, renders it possible for us to inspect them all through the one incision.

When we shall appreciate the importance of taking histories with care; when we shall look upon every patient complaining of indigestion as having some serious lesion until we can satisfactorily prove the contrary; when we shall stop considering dyspepsia as due to a neurosis, then shall we mark progress in our diagnostic ability in diseases of the upper abdomen.

PERFORATING GASTRIC AND DUODENAL ULCERS.*

By Arthur Hollingworth, M. D.,
Providence, R. I.

The following remarks are based on personal experience in the treatment of perforating gastric and duodenal ulcers. No reference will be made to the surgical literature on the subject and no statistics with which to bore you will be enumerated. I present this paper with the hope that it will stimulate a healthy discussion and to impress upon your minds the necessity of being on the alert to detect this overlooked and much-neglected pathological condition.

In acute abdominal pain the perforation of a gastric or of a duodenal ulcer is a possibility one must consider. There are two types of perforations: acute and sub-acute or slow-leaking. Except in the slow-leaking type of rupture, the picture is one of a violent pathological storm. This completely overwhelms the patient and he prays and beseeches you for the relief he so sorely needs. The onset of the attack is so abrupt that the victim is usually thrown into immediate collapse. The pain is intense, it is localized in the pit of the stomach. The abdomen is board-like. The pulse is rapid and there is profuse sweating. Vomiting may or may not occur. If you see the case early the white count is normal. If a few hours elapse between perforation and the blood examination, the white corpuscles are apt to be increased. The whole picture is one of something gone wrong inside the abdominal cavity and calls for immediate help.

These patients who are so suddenly seized with the agonies of perforation are in such profound distress that a history of previous troubles is hard to elicit. But most patients will tell you that they have had indigestion for some time, and you can often get a word picture which tallies with all the cardinal symptoms of chronic ulcer of the stomach. A few do not give this information and they will tell you that they have never had any stomach trouble. Men are more prone to attack than women. I have never seen but one case of ruptured ulcer in a woman, and this one was of the slow-perforating type. Alcoholism is a very important factor in the causation of these conditions.

A typical attack of acute perforation of a gastric ulcer is illustrated by the following:

A. B., a young adult, age 25 years, apparently strong and robust, was one day plying his usual trade, that of driving a baker's wagon. He was in his usual good health, as he thought. While in the act of stepping down from his seat on the wagon he felt a sudden agonizing pain in the pit of the stomach. He fell in collapse and was carried to a nearby house whence he was speedily removed to the hospital. I saw this man about an hour after the onset of the attack. He was suffering intense pain, the point of tenderness being in the epigastrium. The abdomen was board-like. The pulse was rapid and the patient gave every appearance of a person desperately ill. The white count was normal. He gave a history of indigestion extending over a period of six months. A diagnosis of acute perforated gastric ulcer was made and confirmed by operation, which was immediately performed.

There is only one other condition which closely resembles this, and that is acute hemorrhagic pancreatitis. I know of no way absolutely to differentiate the two clinically, but I am of the opinion that the latter complaint is the more serious.

Gallstone colic and acute appendicitis have to be differentiated in making a diagnosis. But the symptom complex of these two conditions is so well fixed that they can with careful reasoning be ruled out.

The treatment of ruptured ulcer is surgical and calls for immediate laparotomy. The site of perforation is easily found by seeking the source of the stomach contents which pour through the hole. In all the cases I have seen this has been on the anterior surface of the stomach or duodenum. It has a round and punched out appearance and is surrounded by a ring of induration. The abdominal cavity is

*Read before The Providence Medical Association, March 5, 1918

apt to be flooded with stomach contents, and this complication calls for drainage at the site of perforation with a stab wound for pelvic drainage. I am content with closing the hole with a double row of chromic gut sutures, then bringing over a piece of omentum to re-enforce the same. Some surgeons advocate performing a posterior gastroenterostomy at the same time. But I feel that this is not good surgery, for the reason that the patient is desperately ill and the peritoneal cavity is already infected. Saving of time and less handling of tissues is better surgery. It is far safer for the patient for the surgeon to perform a gastroenterostomy at a later sitting—if this seems advisable—thus making it a two-stage operation.

The prognosis is good in these cases, for the fact that the stomach contents are far less infectious than the contents of any other part of the alimentary canal. Out of a dozen cases in my series there was one death.

The after treatment is important. Absolute rest and quiet are essential. Nothing is allowed by mouth the first twenty-four hours, the patient's lips and mouth being kept moist by swabbing. The next twenty-four hours dram doses of water are allowed every half hour. The third day more water is given with the addition of albumen water or thin broths. By the end of the first week the patient is on soft solids. Rectal saline or tap water are not given by the Murphy drip, as this treatment is worthless. It gives the patient much discomfort, too. It does not fulfill what is claimed for it, and is nothing more nor less than a surgical fad. The only sensible way to use saline and increase the body fluids is to give it subcutaneously or intravenously. These last two methods are advocated if the case warrants the use of saline. Cathartics and enemata are not permissible. Pituitrin is very efficient in the reduction of distention and in the expulsion of gas. Morphia in small doses is given cautiously. I question the use of the Fowler position, but do have the patient's head elevated slightly—this for his comfort only. The inclination of the plane from the pelvic brim to the outside of the colon down to the right kidney region is inclined 51° to the horizon, and with the patient horizontal the renal fossa is about as deep as the cul-de-sac of Douglas. Fowler's position—10° to 15°—is therefore nothing short of surgical fallacy. The exaggerated Fowler is likewise objectionable. The position of rest is lying down, and no matter how it is maintained, the sitting posture would seem to tax the patient's strength and especially to increase the heart's work. The Fowler position is tiring and difficult to maintain and the patient voluntarily or involuntarily slips down or to one side. Therefore as questionable drainage is obtained the sitting posture does more harm than good. I have little patience with surgical fads or with meddlesome surgery. After all, the keynote to surgical success is faultless cleanliness, simplicity of technique and rapidity of operation. Too much postoperative interference is bad. Let us not forget that after all Mother Nature is a gentle nurse and Father Time is a pretty good doctor.

From the dozen or more cases I have operated upon in the last couple of years certain definite conclusions can be drawn: There was but one death in this series.

I. Acute perforation of the stomach and duodenum is much more common in men than in women.

II. Most of these cases give a history of chronic indigestion and alcoholism.

III. Most cases occur in young adult or middle life.

IV. The interval between perforation and operation should be the shortest possible for best results.

V. The operator should be content with simple closure of the hole. If further surgery is thought necessary it should be done at a later sitting.

VI. In skilful hands the prognosis is good.

EPIDEMIC CEREBROSPINAL MENINGITIS.*

By William H. Jordan, M. D.,
Providence, R. I.

Cerebrospinal meningitis is an acute infection of the leptomeninges which may be due to a great many different microorganisms, among their number is one which, up to the past few months, was not known to produce disease in any other part of the body.

The disease is not primarily a meningitis. It is a generalized systemic invasion by the meningococcus—a sepsis—with possible secondary involvement of the meninges, joints, pericardium, endocardium, testicles, conjunctiva, sclera, pleura

*Read before the Providence Medical Association, March 5, 1918

and lungs, from all of which regions, in addition to the tonsils and pharynx, the micrococci have been isolated. In many cases the systemic symptoms are not at all characteristic. Moderate fever, weakness, mild apathy, coated tongue, pharyngitis or coryza, and mild digestive disturbances are most common.

This type is a specific form, and is known as meningococcus intracellularis, and sometimes as diplococcus intracellularis meningitidis, because of its supposed affinity for the protoplasm of the polynuclear leukocytes present in the inflamed meninges. This name is somewhat of a misnomer because the meningococcus is found not only within the cells but also outside in the surrounding fluid.

Etiology: The disease germ causing this disease was discovered by Weichselbaum in 1887 at six autopsies in cases of cerebrospinal meningitis. It occurs free in the purulent cerebrospinal fluid both within and without the cells, and bears a striking resemblance to the gonococcus. They are always arranged in pairs.

This discovery of Weichselbaum attracted very little attention until 1895, when Jager reported similar findings in ten fatal cases in an epidemic occurring among soldiers. Hubner further confirmed these facts when, by lumbar puncture in five children, he succeeded by injections into the spinal canal of a goat in demonstrating its ability to cause a purulent meningitis.

The meningococcus is very sensitive and dies out quickly unless frequently transplanted. It has never been found outside the body. It is almost non-pathogenic for animals, except young mice, guinea pigs and monkeys.

Transmission: The meningococcus enters and leaves the body by way of the nasopharyngeal membrane. It passes from the mucous membrane to the meninges in which it multiplies still further and thus sets up an acute inflamation. It is not fully established whether the microorganism passes directly to the nervous system by way of the lymphatic connections between the nasopharyngeal mucosa, and the meninges which extend along the olfactory nerves, or indirectly by the blood, since it often happens that the meningococcus may be cultivated from the general blood early in the disease. However, it is generally acknowledged that the mucous membrane of the nasopharynx harbors the germs, and very often carriers are found which themselves are immune, but are a grave menace to the public by their ability to spread the disease, by ejecting the secretions of the nasopharyngeal mucous membrane into the surrounding atmosphere, by loud talking, coughing, sneezing, hawking and spitting.

The time relation between carriage of the germ and development of the symptoms varies from one day to several weeks.

Symptoms: The symptoms of epidemic cerebrospinal meningitis are those of a severe acute febrile disease, characterized by a marked prominence of the motor and sensory symptoms of irritation, by the rigidity of the neck, spinal column, muscles, violent headache, dorsal pains, frequent vomiting, very often projectile in character, convulsions, delerium and marked prostration.

Very often they are hypersensitive, and every loud noise, loud talking, every forcible attempt to handle them, even passive motion and change of position evokes distinct signs of pain.

The disease most frequently begins suddenly with fever, sometimes with chill, vomiting, headache, clouded intellect, delirium or stupor and at times there may be muscular twitchings or convulsions. While the sudden onset is the rule, it may start more gradually with intermittent symptoms, and when recognized early the prognosis is somewhat better.

The pulse is usually very rapid from the start, only retarding when the temperature declines. Very often there appears between the third and sixth days herpes labialis or nasalis. Rigidity of the neck is one of the most constant physical signs, and any attempt to manipulate the head causes pain with its attending sharp cry which immediately subsides when the head is released. There is also frequently found retraction of the head. The pupils are usually contracted in the early stages, and bright light often annoys the patients, while in the later stages the pupils are widely dilated and the light does not seem to disturb them. The pupillary reaction is very often sluggish and in severe cases it may be absent. Strabismus is rare. The eyes seem rather to have a dreamy appearance. A marked tonic spasm of the extremities is often observed and attempts to move the legs will often cause severe pain. Hyperesthesia of the skin is almost always present and quite marked in severity.

Kernig's sign is present in most of the cases. Brudzinski's sign is usually present. The knee-

jerks may be absent, exaggerated or normal. Ankle clonus may or may not be present. None of these signs are diagnostic of meningitis, nor does their absence rule out this disease. The skin lesion may be present in the form of small punctate hemorrhages widely scattered or may appear as small papules. They are present in about 20 per cent. of the cases. There is always a leukocytosis present averaging from 15,000 to 40,000. In infants very often the only symptoms present are fever and the bulging fontanelle.

Complications: The most frequent complications are otitis media, conjunctivitis, endocarditis, lobar pneumonia and broncho pneumonia.

Diagnosis: While the symptoms as enumerated may lead one to suspect cerebrospinal meningitis, they are not conclusive, and in order to establish a positive diagnosis, it is absolutely necessary to resort to lumbar puncture and examination of the spinal fluid.

The lumbar puncture is performed under aseptic precautions in the third or fourth lumbar space. The patient lies on his side with back well arched, and in the case of a child must be held in this position by an assistant. The distance the needle is pushed in depends on the size of the patient and varies from a half inch in infants to two inches in larger and older children. The cerebrospinal fluid is allowed to flow until the pressure is so reduced that only three or four drops come per minute. If the fluid is clear, it usually means that we are dealing with some other form of meningitis or with normal fluid, while a turbid fluid generally means a cerebrospinal meningitis, and serum should be administered at once.

Detection of carricrs: A special bacteriological technic has been devised to discover the presence of the meningococcus in the secretions of the nose and throat. There has also been devised a special tube known as the West tube for collecting the secretions free from admixture with saliva and contamination from the tongue and lips. This tube consists of a glass tube bent at one end at nearly right angles. A copper wire carrying at one end a swab of cotton is inserted into the tube. This tube is inserted well back in the mouth, and by pushing the wire forward the swab of cotton comes in contact with the posterior pharyngeal wall and is then pulled back inside the tube and the whole withdrawn. Cultures are made from this and the presence of the micro-organism determined. The meningococcus is gram-negative. Two solutions—Sterling's gention violet and Gram's iodine—are employed for staining, followed by a counter stain.

Prognosis: Before the discovery of the cause of the disease and the successful production of an antiserum, the mortality varied at different times and in different locations and ranged from 70 to 100 per cent., and in the recovered cases frequent serious permanent sequelae were observed. The anti-meningococcic serum began to be employed in 1906 and 1907. Since then the mortality has steadily declined and is now about 25 to 30 per cent.

The serum treatment to be successful must first of all be potent and secondly must be used early and frequently. Some of the serums on the market are not of great practical value and care must be exercised in the selection of a proper and efficent serum. The serum should be clear and of a slight straw color.

Mcthod and dangers of administering serum: If upon making your lumbar puncture the spinal fluid withdrawn should be cloudy, the antimeningitic serum should be administered at once without waiting for a bacteriological examination. The amount given will depend somewhat on the amount of fluid withdrawn. The serum should be slightly warmed, being careful not to warm it above 98°, otherwise it may coagulate. In infants I give 15 c.c.; in older children 30 c.c. every 12 hours for two or three days, unless there are marked signs of improvement. If the temperature remains down and the other signs of meningeal irration have subsided, I wait 24 or 48 hours, make a lumbar puncture, and if the fluid is still cloudy and under pressure, I give another dose of 15 c.c. and again await results. If there is no further elevation of temperature, it is well to watch the patient carefully for several days before you are sure that no further relapses occur. The serum is also administered intravenously in the septic type. It is administered intraspinally by the gravity method, which is by far the safest. During the administration the patient's respiration, pulse and color should be carefully watched for danger signs of intradural pressure, which are indicated by cyanosis, cold sweat and failing pulse. If these should appear, the container should be lowered and the patient's head elevated. Occasionally artificial respiration will be necessary to restore normal breathing.

Case Reports.

Case 1. Elsie F., 12 years old; past history uneventful. Became sick April 12, 1917. Complained of sore throat, headache, pains in the legs and arms. No vomiting. P. E. Head, neck, eyes and reflexes negative. Throat congested and tonsils enlarged. Temperature 101°, pulse 100, respiration 40. She did not appear very sick. April 13: Headache more intense. Vomited during night and appeared extremely sensitive. P. E. Eyes negative, reflexes negative, neck rigid and painful. Throat still inflamed. Kernig's and Brudzinski's signs present. Patellar reflexes increased. Lumbar puncture under slight chloroform anaesthesia; 40 c.c. of cloudy fluid removed and 30 c.c. serum given.

April 14, a. m. Some better. Temperature 100°. Lumbar puncture, 35 c.c. fluid removed. 15 c.c. serum given. 6 p. m. Temperature 99°, pulse 80, respirations 28. Feeling very much better.

April 15, 9 a. m. Had a very good night. Seemed quite cheerful. Temperature 99.4°, pulse 88, respiration 18. 6 p. m. Temperature 100°, pulse 94, respirations 20. Lumbar puncture, 30 c.c. of fluid removed and 15 c.c. of serum injected.

April 16. Feeling very well. Temperature 98.6°, pulse 80, respirations 18. Very bright and anxious to get up.

April 17, 18, 19 and 20 her temperature, pulse and respirations remained normal. She had four lumbar punctures. Was given three injections with a total of 60 c.c. of serum, and made a complete recovery in practically five days.

Case 2. L. P., 2 years old. Taken sick June 30, 1917, with fever and vomiting. Seen by me in the evening of July 1. Symptoms of fever, slight nasal discharge and inflamed throat.

July 2. Temperature 102°, pulse 120, respirations 30. Reflexes exaggerated, internal strabismus of left eye, nervous tremor. No Kernig's or other signs present. Lumbar puncture 15 c.c. of turbid fluid removed, which on examination showed the organism. Later in the day made another lumbar puncture, removed 10 to 15 c.c. of fluid and injected 15 c.c. of serum.

July 3, a. m. Much better. Lumbar puncture. 25 c.c. of fluid removed and 15 c.c. injected. 6 p. m. of same day. Lumbar puncture. 30 c.c. of fluid removed and 15 c.c. injected.

July 4. 25 c.c. of fluid removed. 15 c.c. of serum injected.

July 5. O. K. From this time on he remained normal. The last time I saw him, on July 15, he was entirely well. He received in all 60 c.c. of serum.

Case 3. A. G., 5 years old. Taken sick December 31, 1917, with pain in the legs, vomiting and fever. Seen by me January 1, 1918. He was unconscious, but handling caused him to scream out with pain. All the classical signs were present. Lumbar puncture done and 40 c.c. of purulent fluid removed. Later in the day another lumbar puncture was done and 15 c.c. of serum given. He was given three doses of 15 c.c. of serum and the spinal fluid remained sterile, but still contained pus cells until January 6, when he was entirely well.

Cases 4 and 5. D. D. and T. D., twins, age 17 months. Seen by me January 3, 1918. Became sick five days previous. Both children had none of the classic signs of meningitis except high fever, 105°, and bulging fontanelle. One of them was in extremis and died while I was making a hurried examination. I did a lumbar puncture after he died and removed about 10 c.c. of turbid fluid. Lumbar puncture on Dominic gave about 20 c.c. of turbid fluid, and as I had some serum with me, I gave him 15 c.c. at once.

January 4. Baby much better. Temperature down to 101°. Lumbar puncture. 15 c.c. fluid removed and 15 c.c. of serum given. His temperature never went up again and he made a good recovery.

Case 6. M. D., 6 months old. Became sick February 1, 1917, with a convulsion. Her temperature when I saw her was 106°. The only other symptom present was a bulging fontanelle. I did a lumbar puncture and removed 20 c.c. of turbid fluid. Later on I gave her 15 c.c. of serum.

February 2. Temperature 101°, pulse 120, respirations 30. Looking good. Lumbar puncture. 20 c.c. fluid clearer than on previous day was removed and 15 c.c. of serum given.

February 3. Temperature, pulse and respirations normal.

February 4. Her condition was the same. This was a mild case, starting with severe symptoms and making a complete recovery in three days with only 30 c.c. of serum.

Case 7. E. D., 4 years old. Sister of previous

patient. Became sick four days after her sister. Past history: This child one year before had a severe attack of poliomyelitis, which involved the whole right side of body, including the face, and the left leg. I treated her at this time and she made a good recovery, so that at the onset of this illness she had only a very slight ptosis of the right upper eyelid.

Present illness: Started on February 5 with fever 104°, headache and vomiting. I did a lumbar puncture and removed 35 c.c. of turbid fluid and injected 30 c.c. of serum.

February 6. Temperature 101°, pulse 118, respirations 40. Lumbar puncture. 20 c.c. turbid fluid. 15 c.c. of serum given. 9 p. m. Temperature 102°, pulse 120. Neck rigid. Lumbar puncture. 25 c.c. turbid fluid. 15 c.c. serum given.

February 7. Temperature 102°. Lumbar puncture. 20 c.c. fluid removed and 15 c.c. serum given.

February 8. Temperature 100° and feeling a little better.

February 9. Temperature 104°. Looked worse. Lumbar puncture. 30 c.c. fluid removed and 15 c.c. serum given.

February 10. Temperature 99.6°, pulse 100, respirations 25.

February 11. Temperature 101.6°.

February 12. Temperature 100°. 9 p. m. Temperature 104°. Lumbar puncture. 40 c.c. turbid fluid removed. 15 c.c. serum given.

February 13. Temperature 101°. Lumbar puncture. 10 c.c. fluid removed. 15 c.c. serum given.

February 14, 15 and 16 her temperature ranged around 101°, 101.5°.

February 17. Temperature 102°. Lumbar puncture and 15 c.c. of fluid removed. 15 c.c. of serum given.

February 18. Temperature 103°. Lumbar puncture. 15 c.c. thick fluid removed. 15 c.c. of serum given.

February 19. Lumbar puncture. 10 c.c. thick fluid removed and 15 c.c. serum given.

February 20. Temperature 103°. Condition much worse. Some delirium.

February 21. Still delirious. Lumbar puncture. 15 c.c. of thick fluid removed and 15 c.c. serum given.

February 22 and 23. Her condition remained about the same.

February 24. Lumbar puncture. 5 c.c. of thick fluid removed and 10 c.c. of serum given.

February 25. Growing worse. Lumbar puncture. 10 c.c. of thick pus removed. 15 c.c. of serum given.

February 26. Both ears started to discharge.

February 28. Skin lesions in the form of pustules began to appear around the nose, fingers, back of hands and genitals.

March 1. Her temperature went up to 105°. Examination of her lungs showed dullness on the right side in back with bronchial breathing. These conditions gradually grew worse until the 5th of March, when she died.

This child was very sick for four weeks, during which time she received 205 c.c. of serum in 14 doses.

Case 8. M. S., 9 months old boy. Breast fed. Previous history uneventful. Became sick August 30, 1916. Mother said he was all right during the early part of day. In the afternoon he became very restless. Vomited and looked sick. I saw him at 8:15 p. m. P. E. Well nourished and developed baby boy. Very irritable and sick looking. Hyperalgesic. Eyes were negative. Patella reflexes exaggerated. Brudzinski's, Macewen's and Kernig's signs were present. Anterior fontanelle was bulging. Temperature 103°, respirations 58 and pulse 144.

I did a lumbar puncture and removed 20 c.c. of turbid fluid. Two hours later I did another lumbar puncture and removed 15 c.c. fluid and injected 15 c.c. of serum.

Microscopical examination of the fluid showed meningococci. August 31. Lumbar puncture. 20 c.c. of fluid removed. 15 c.c. of serum injected. Temperature this day varied between 101° and 104°.

September 1. Lumbar puncture. 20 c.c. fluid removed and 15 c.c. serum injected. Temperature and condition about the same as previous day.

September 2. Child looked better, but temperature went up to 105.4°. Lumbar puncture. 20 c.c. of fluid removed and 15 c.c. of serum given.

September 3. Temperature remained at 102° for 12 hours. Lumbar puncture. 20 c.c. of fluid removed and 15 c.c. of serum injected at 8 a. m. At 2 p. m. temperature went up to 105.4° and then gradually declined to 100°. For the next 14 days his temperature varied between 99° and 105.4°.

On September 7, the ninth day of disease, a serum rash appeared and lasted for two days.

On September 15, the 17th day of the disease, two hours after injection of serum, serum sickness developed with the most alarming symptoms of shock, rigors, vomiting, extreme distension of the abdomen, with labored breathing and an elevation of temperature from 99° to 105.4°. Two more doses of serum were given after this, but a small dose of serum was given subcutaneously preceding the intradural dose without any alarming symptoms.

This boy was severely sick for 21 days, during which time he was punctured 23 times and received 14 doses of serum, had a serum rash on the ninth day and a severe serum sickness on the 17th day, finally making a complete recovery.

Case 9. D. D., 3 years old. Became sick during the night of February 19, 1918. Vomited

several times during the night and early morning of February 20. At 11 a. m. he had a convulsion. I saw him at 12:30. He was unconscious. Temperature 103°, pulse 140. His eyes were rotated upwards, but no other signs of meningitis were present. Lumbar puncture was done and 10 c.c. of turbid fluid removed and 30 c.c. of serum given. Smear from the fluid showed diplococci.

February 20. Temperature 99°, pulse 120. Conscious and appeared much better.

February 21. Temperature 98.6°, pulse 100.

February 22. Head retracted. Temperature 101°, pulse 110. Lumbar puncture. 30 c.c. cloudy fluid removed and 15 c.c. of serum given intraspinally.

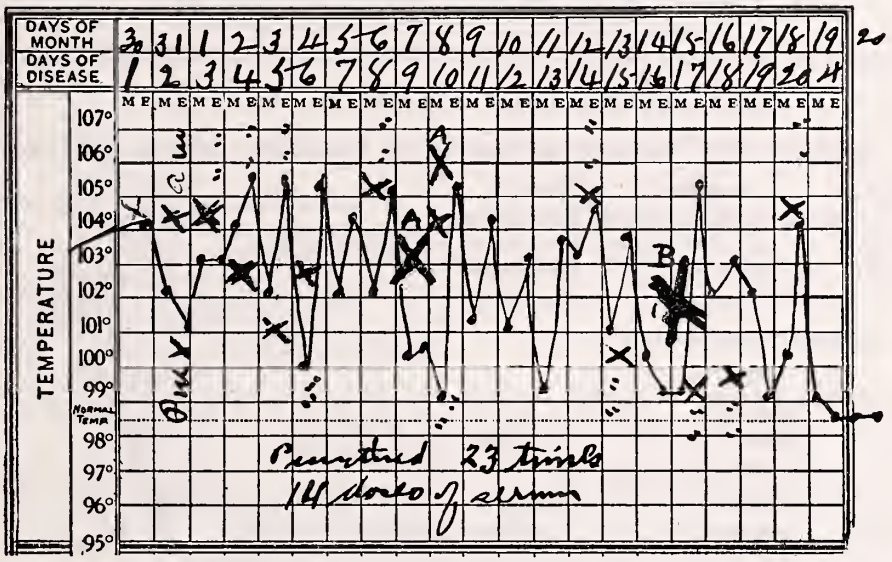
February 14. Temperature 101°. Headache returned. Head retracted again. 15 c.c. of serum given intravenously.

February 16. Much better. Temperature 99°. Pulse 90. No headache. Neck more normal. Smear showed diplococci.

She remained normal for the next five days and was discharged cured.

Case 11. V. C., 14 months old, sister of previous patient. Became feverish February 13, three days after her sister became ill. Her temperature was 104°. Lumbar puncture was done and 30 c.c. of turbid fluid removed and 15 c.c. of serum given intraspinally. Smear showed diplococci.

February 14. Temperature was 99°, pulse 115.



Case 8—August 30, 1916 Crosses indicate injections of serum
Crosses A indicate serum rash Cross B indicates serum sickness

February 22, 23, 24 and 25 temperature remained normal, and he was discharged cured.

Case 10. R. C., 12 years old. Became sick in the evening of February 10, 1918, with pain in the legs, headache and vomiting. I saw her the next day. She was semiconscious. Complained of headache, vomiting, pain in neck. P. E. Head and neck rigid. Kernig's present both sides. Temperature 105°, pulse 120. Patellar reflexes increased on both sides. Lumbar puncture. 50 c.c. of turbid fluid removed and 30 c.c. of serum given intraspinally.

February 12. Temperature 99°. Neck very rigid. Severe headache, but conscious. Lumbar puncture. 25 c.c. of turbid fluid removed and 20 c.c. of serum given intraspinally. Smear showed diplococci.

February 13. Headache still present. Temperature 102°, pulse 120. Her upper lip was broken out with a crop of herpes. Lumbar puncture. 40 c.c. of fluid removed and 20 c.c. of serum given intraspinally.

She looked and acted normal, taking her food and retaining it.

February 15. Temperature was normal and remained so. She was discharged cured.

Case 12. H. D., 8 months old. Taken sick February 26, 1918. I saw him in consultation March 1. A diagnosis of cerebrospinal meningitis had been made by the attending physician. I did a lumbar puncture. Removed 30 c.c. of turbid fluid and gave 30 c.c. of serum intraspinally. His temperature was 104°, pulse 134. He was unconscious and looked extremely sick. Smear showed diplococci.

March 2. Temperature 101°, pulse 110. He became conscious during the early morning and was able to nurse.

March 3. Temperature 102°. Another lumbar puncture was done. 15 c.c. of fluid removed and 15 c.c. of serum given.

March 4. Temperature 98.6.° No signs of meningeal irritation present.

March 5. This morning his temperature was 99° and he appeared entirely well.

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society

Issued Monthly under the direction of the Publication Committee

Editorial Correspondence, Books for Review and Exchanges should be addressed to the Editor; Advertising Correspondence to the Business Manager.

Advertising matter must be received by the 15th of the month preceding date of issue.

Advertising rates furnished upon application, to the business manager, J. F. Hawkins, M.D., 114 Westminster Street, Providence, R. I.

SUBSCRIPTION PRICE, $2.00 PER ANNUM. SINGLE COPIES, 25 CENTS.
Entered at Providence, R. I. Post Office as Second-class Matter.

RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

JOHN CHAMPLIN	*President*	Westerly
GARDNER T. SWARTS	*1st Vice-President*	Providence
JOHN M. PETERS	*2d Vice-President*	Providence
JAMES W. LEECH	*Secretary*	Providence
W. A. RISK	*Treasurer*	Providence

DISTRICT SOCIETIES

KENT
Meets the second Thursday in each month

H. BARTON BRYER	*President*	Natick
JAMES M. BODWELL	*Secretary*	Phenix

NEWPORT
Meets the third Thursday in each month

EDWARD V. MURPHY	*President*	Newport
A. CHACE SANFORD	*Secretary*	Newport

PAWTUCKET
Meets the third Thursday in each month excepting July and August

ARTHUR H. MERDINYAN	*President*	Central Falls
CONRAD E. THIBODEAU	*Secretary*	Pawtucket

PROVIDENCE
Meets the first Monday in each month excepting July, August and September

WILLIAM F. FLANAGAN	*President*	Providence
CHARLES O. COOKE	*Secretary*	Providence

WASHINGTON
Meets the second Thursday in January, April, July and October

A. B. BRIGGS	*President*	Ashaway
W. A. HILLARD	*Secretary*	Westerly

WOONSOCKET
Meets the second Thursday in each month excepting July and August

EDWARD L. MYERS	*President*	Woonsocket
E. F. HAMLIN	*Secretary*	Slatersville

Section on Surgery—2d Wednesday in each month, Dr. F. G. Phillips, Chairman Dr. Peter P. Chase, Secretary and Treasurer.

Section on Diseases of Children—3d Tuesday in each month, Dr. Henry E. Utter, Chairman; Dr. J. S. Kelley, Secretary and Treasurer.

Section on Gynecology and Obstetrics—3d Wednesday in each month, Dr. C. W. Higgins, Chairman; Dr. E. S. Brackett, Secretary and Treasurer.

Section on Medicine—4th Tuesday in each month, Dr. D. Frank Gray, Chairman; Dr. C. W. Skelton, Secretary and Treasurer

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President, Dr. Harlan P. Abbott, President; Dr. C. J. Astle, Secretary-Treasurer.

NOTICE

The House of Delegates having voted that the dues shall be $10.00 for 1918, the Treasurer desires to call the members' attention to Article IV Sec. 6 of the By-Laws: "Every Fellow shall annually contribute the Annual dues and the same shall be due and payable to the Treasurer, January first of each year."

EDITORIALS

ANOTHER SPRING DRIVE.

The medical profession is again to be congratulated for the united stand taken at the recent hearing on the bill to reorganize the State Board of Health. The medical profession was naturally more interested in the proposed act than the other boards and commissions who would be eliminated if this act were to become a law. The arguments of the opponents were ably and intelligently presented. In the face of such determined opposition from the responsible citizens who compose these boards and com-

missions, the committee cannot report favorably upon this bill. Its vicious features were so poorly concealed under the guise of efficiency that one wonders why the committee itself had not discovered these faults. To the average citizen, unacquainted with the duties of these boards and commissions, it was an evidence of progressive legislation to eliminate these various bodies and substitute in their places a single commission, clothed with multifarious powers and duties. The wisdom of a Solomon would scarcely suffice to pass intelligently upon problems ranging from the control of epidemics to the licensing of barbers. It was clearly brought out at the hearing that no one commission could properly care for all these various duties. But as usual, a joker was present, and none too cleverly disguised.

It was the combined salary list of $16,000, distributed between the triple-headed commission and the secretary. More startling than the salary, however, was the fact that these men, except the secretary, were not to be full-time men, although the recipients of a comfortable wage. In fact, they were not legally required to meet but once a month. It has been clearly established that certain things cannot be combined and legislated out of existence. One of these is the earnest endeavor of conscientious men and women who have built up ideals and standards in these boards, and given freely of their time without reward other than the consciousness of duty well performed.

The medical profession in the past has allowed vicious legislation to become law largely through lack of united effort to oppose such legislation at the proper time and in the proper manner. Now that they have become conscious of their power, and, like the old war horse, have smelled the smoke of battle, we are loath to believe that they will ever again stand idly by and allow improper legislation to become enacted without a vigorous protest.

DISTRICT SOCIETY NEWS.

Actuated solely by a desire to make the JOURNAL a source of information as to local medical affairs, the Editor has had printed upon the editorial page of each issue the names of the officers of the component district societies. It is to be hoped that these officers have noticed that the last issue carried blanks in this column, simply because the information could not be obtained even after courteous request for it was made. Moreover, too often the officers of the State Society are not kept in touch with the affairs of the District Societies, a condition which is bound ultimately to result in a looseness of organization which is unfortunately, by reason of the constitutions of the State and District Societies, to some extent ever present in Rhode Island. Ours is one of the oldest State Societies in the country and is naturally somewhat jealous of its rights and sensitive as to its freedom of action, and it is this very state of mind which has prevented a reorganization along the lines adopted by younger State Societies. And by reason of this it is especially desirable that the medical interests within the State be closely knit and a closer coöperation between the District and State Society be fostered. It is, therefore, urged that the responsible officers keep the JOURNAL in touch with their doings and especially with changes in officers. Kent, Pawtucket, and Providence are anxious to know what Newport, Washington and Woonsocket are doing, and these columns offer an unexcelled medium of exchange.

COMPENSATION FOR EYE INJURIES.

While under the Workmen's Compensation Act in Rhode Island the oculist is not called upon to estimate the amount of compensation which is due the injured party by reason of impaired vision, it is best that he know what other states have considered a reasonable basis of estimation. The report of the Chicago Ophthalmological Society for the purpose of estimating a basis for adjustment of compensation for injury of the eye assumes two classes of people: (A) Those whose labor depends largely upon acuity of vision, and (B) Those engaged in manual labor where perfect vision is not so absolutely necessary. Vision of the injured eye, plus vision of the uninjured eye plus stereoscopic vision plus cosmetic effect, all divided by 3.5, shall represent the ocular efficiency of the injured. This degree of ocular efficiency shall be subtracted from full compensation (100) and the result shall equal the percentage of full compensation to which the injured is entitled.

For example, a machinist is injured in the right eye and the final vision of this eye equals 0.4. The vision of the uninjured eye is normal;

he has lost all but about 20 per cent. of his ability to judge depth. No external scars can be seen, then—

Factor I= 40
Factor II=100
Factor III= 20
Factor IV= 50

210÷3.5=60 efficiency.

Compensation (100) minus efficiency (60)= 40 per cent. of total compensation injured is entitled to.

Class B. Vision of the injured eye, plus vision of the uninjured eye, plus cosmetic effect, all divided by 2.5, shall represent the ocular efficiency of the injured. This degree of ocular efficiency shall be subtracted from full compensation (100) and the result shall equal the per cent. of full compensation the injured is entitled to.

For example, a trench digger is injured in the right eye and the final vision of the eye equals 0.4. The vision of the uninjured eye is normal, no external scar can be seen. Then—

Factor I= 40
Factor II=100
Factor IV= 50

190÷2.5=76 efficiency.

Compensation (100) minus efficiency (76)= 24 per cent. of total compensation injured is entitled to.

THEORY OF OCULAR MOVEMENTS.

Last year George of Chicago evolved a new theory of ocular movements, contending that the accepted theory that the center of ocular rotation is within the globe is wrong, and that the eye does not rotate about a given center, but that it oscillates from a fixed point and that this fixed point is the maculae. He maintains that Tenon's capsule serves as a sling, a hammock or foundation on which the eyeball rests. He states that if it were true that the center of ocular rotation was the center of the eyeball that when the eye was turned outward 50°, the posterior pole of the eye would be rotated inward 50°, and that this is anatomically impossible because the optic nerve is not long enough to admit of such an excursion without stretching. He goes on to show that the anterior part of the eye oscillates from the macular center, that the optic nerve has no movement, that the eye does not rotate in Tenon's capsule, but that this capsule moves with the eye, and that the conformation of the anterior bony walls of the orbit shows that they were fashioned to admit of the oscillatory movement of the globe. He also maintains that the oblique muscles have nothing to do with tilting of the eye, but that their action is limited to rotation. He exhibited dissections and models to prove his claims.

A committee was appointed to investigate the claims and their report is a very elaborate and highly scientific exhibit which makes the contentions of Dr. George impossible in so far as geometry and trigonometry can prove anything. The report, however, of Dr. Dean W. Myers of Ann Arbor proved to be a death blow to the theory of oscillation. He found a man with an eye which needed to be enucleated and who was willing to lend himself to a practical demonstration of ocular movements. His eye was accordingly rendered anesthetic in front by cocain and behind by the injection of novocain. The eye was then pierced with a heavy needle from front to back, the aim being to pass it through the path of the anterior-posterior axis. A shot was then fastened on the needle at the cornea. An X-ray plate was then placed under the chin of the subject, his gaze directed to the extreme temporal and the exposure from above made for five seconds; the patient's gaze was then directed to the extreme nasal and a second exposure made on the same plate for five seconds. The result of numerous such exposures in different positions was the same in all, namely, the needles were crossed and measurements of the eye, which was then enucleated, showed the crossing was about 1½ m.m. back of the geometric ocular center.

THE CAMOUFLAGE OF WORDS.

For us physicians, as for most men, words have a strange fascination. They crystallize our knowledge and clothe our ignorance. They are our servants, as being the helpful ministers of our thoughts; and when they become our masters they compel us to many a dubious enterprise. It was Claudius Galen, we think, the greatest word-builder of them all, who said that the ancient sect of the Methodists were "terrible men for names." But the terrible men for names did not cease with the Methodists; we have them with

us to-day, for even the most recent medical writings are full of examples of what we may call, to borrow the apt phrase of the French, the camouflage of words.

Now besides the camouflage which conceals things from others, there is a camouflage which conceals them from oneself, and this, we may say, is the more subtle variety because less easy to detect. In the matter of words it is especially deceiving, and alluring too, since it gives them the appearance of reality when they have it not. Let us take, for example, a writer who not long since was discussing affective physiology. "As the child," he said, "develops its personality properly human, a double kind of submergence seems to occur: figuratively, a submergence of unpleasantness in some cases into an habituated subconsciousness, and literally, perhaps, a submergency of neuronal motor control from the 'neopallium' into the deeper layers of the cortex, the 'archi pallium.' This universal process in no way invalidates the kinesthetic theory of feeling. since it leaves undisturbed the original primary influences on the autonomic and spinal greys as well as the secondary resultants therefrom into the cortex by way of the distributing thalamus." Are we captious when we complain that in this kind of writing there is a conspicuous lack of clearness and that the words have no real meaning? One feels a conscious void, a sense of frustration in one's efforts to grasp some thing. "It seems very pretty," as Alice said when she had finished 'Twas brillig and the slithy toves," "but it's *rather* hard to understand." And yet we are reading an account of a sober scientific research. What we would like to know, is a figurative submergence of unpleasantness into an habituated subconsciousness? We can understand the actual submergence of, say, a submarine, but a "figurative" submergence,—that is beyond us! Moreover, if part of a process is "figurative" and part "literal," how can such an impotent bundle of contradictions invalidate or not invalidate a "theory" of anything whatsoever? All this notwithstanding, a critic tells us that such verbal confusion is excellent and that we may expect from the author "more work in this direction, and as he gets a better and deeper grasp upon his subconsciousness, he will be in a position to strike home with more powerful hammer blows in his attempts to drive his views into our thick skulls." Observe how the verbal camouflage of the writer has narcotized his critic and enticed him into some camouflage of his own. Certainly there is some confusion here. As plain men we have long been under the impression that if you wish to deliver powerful hammer-blows upon a skull, thick or otherwise, you must grasp, not your subconsciousness, but the handle of the hammer. But this example of the camouflage of words is by no means unique. Opening casually another recent and authoritative journal, we read as follows: "Under the influence of chronic alcoholism a spasmophilic diathesis may become manifest in epileptiform convulsions." That again is verbal camouflage.

It has the appearance of knowledge, but really is the lack of it. "Spasmophilic diathesis" means and can mean no more than that someone may have convulsions. Why, then, say it twice in the same sentence? Would it not be simpler to say, "Chronic alcoholics may sometimes develop epileptiform convulsions," and have done with it? It is not quite so imposing, but it states all we know about the matter.

And so we might go on giving instances to illustrate how frequently we all, physicians and surgeons alike, camouflage our minds with words. It is so easy to name a thing and then to put the name behind the thing as an explanation of it. Who knows how many errors in fact and in logic have been decently concealed behind "idiopathic," "idiosyncratic" and others of the same verbal brood? So it all comes to this,—that it is difficult to realize and to remember that words do but express a partial view, a mere aspect of reality, never the whole of it. But most difficult of all is it to attain to the state of mind which the Greeks called *phronesis* and the Latins *sapientia,* that state, namely, which in spite of the magic artistry of words, never mistakes cocksureness for wisdom.

HOPE.

With every ray of increased light on matters medical that reaches the mind of the people, the dawn of an era of better conditions comes nearer. Given a community well versed in the fundamentals of personal and public hygiene, and a well trained, conscientious, and progressive medical personnel is the necessary corollary. Public ignorance is the only pabulum on which can flourish the ignorant doctor, the charlatan, and the quack. To combat such public ignorance is the duty of the profession individually and col-

lectively, not only in purely medical activities and publications, but also through the public institutions of learning, and the press. Why is it that from many of our high schools and colleges there are allowed to graduate each year young men and women who, it is true, can read, write, and perhaps converse in several languages, who have a more or less intimate acquaintance with the best in literature and art, and can with great facility bisect an hypothenuse and extract a cube root, but who think of bacteria as diabolical little many-legged things with malevolent expressions who fly through the air and pounce upon the unwary? It is such as these who, whenever they suffer from any vague general or abdominal discomforts feel that their livers must be "torpid"—and the treatment of "torpid livers" has been found to be simple and lucrative.

Public education in medical matters is at present being carried on in many ways, through the efforts of societies interested in special phases of the subject, through popular magazine articles, usually by competent men, and through various medical columns in the daily papers. These last vary all the way from the efforts of the expert honestly to spread a knowledge of the fundamentals of hygiene, to the medical advice column of the yellow journal in which some half-trained doctor who lacks better employment makes a few misleading general statements and then answers a number of personal inquiries from sick correspondents about as effectively as it is done in the "advice to the love-sick" column which appears on the same page.

As a splendid example of the best type of popular medical educational work, the JOURNAL is pleased to express its unqualified appreciation and approval of the newspaper articles by the Providence Superintendent of Health which are appearing in the *Providence Journal* under the heading, "Medical Facts and Theories."

SOCIETIES

RHODE ISLAND MEDICAL SOCIETY.

QUARTERLY MEETING.

R. I. M. Library Building,
March 7, 1918.

The meeting was called to order at 4:10 p. m. by the President, Dr. John Champlin.

The minutes of the preceding meeting were read by the Secretary.

A communication from the Woonsocket District Medical Society relative to the formation of an Industrial Accident Board was referred to the House of Delegates.

Dr. C. V. Chapin introduced the following resolutions:

"*Resolved,* That the Rhode Island Medical Society is opposed to the passage of Senate Bill 88, which provides for a reorganization of the State Health Department. The Society believes that the Commission of three therein provided would be extravagant and inefficient and that such a form of organization has met with the disapproval of the successful leaders in State health work throughout the country.

"*Resolved,* That a committee of five be appointed by the President of the Society to appear before the General Assembly and oppose the passage of Senate Bill 88 and also to coöperate with the State Board of Health in obtaining legislation needed to improve the health of the State. Said committee shall have power to add to its membership as it may deem necessary."

Both of these resolutions were referred to the House of Delegates.

A eulogy of the late Dr. Ramon Guiteras, of New York, an honorary member of this Society, was delivered by Augustus O. Bourne, Esq.

Dr. William Campbell Posey, of Philadelphia, gave an address, illustrated by lantern slides, upon the subject "Some Unusual Injuries to the Eye." Discussed by Drs. Harvey and Rogers.

Adjourned.

J. W. LEECH, M. D., *Secretary.*

HOUSE OF DELEGATES.
Special Meeting.
March 12, 1918.

A special meeting of the House of Delegates was held at the Library Building March 12, 1918, at 4 p. m. The President, Dr. John Champlin, was in the chair.

A communication from the Woonsocket District Medical Society relative to the formation of an Industrial Accident Board was referred to the Committee on Legislation, Dr. J. E. Mowry, chairman, with instructions to communicate with the Woonsocket District Medical Society.

The following resolutions, referred at the quarterly meeting of the Society, March 6, 1918, were read and adopted:

Resolved, That the Rhode Island Medical Society is opposed to the passage of Senate Bill 88, which provides for a reorganization of the State Health Department. The Society believes that the commission of three therein provided would be extravagant and inefficient and that such a form of organization has met with the disapproval of the successful leaders in State health work throughout the country.

Resolved, That a committee of five be appointed by the President of the Society to appear before the General Assembly and oppose the passage of Senate Bill 88 and also to coöperate with the State Board of Health in obtaining legislation needed to improve the health of the State. Said committee shall have power to add to its membership as it may deem necessary.

The chair appointed as the committee Drs. Matteson, Chapin, Keefe, Fuller and Champlin.

Dr. E. S. Brackett, a member of a similar committee of the Providence Medical Association, invited coöperation by the two committees.

Adjourned.

J. W. Leech, M. D., *Secretary.*

DISTRICT SOCIETIES.

Providence Medical Association.

March 5, 1918.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library on Tuesday, March 5, 1918. The meeting was called to order by the President, Dr. William F. Flanagan, at 8:55 p. m. There were present at the meeting 53 members and 9 guests. The records of the preceding meeting were read and approved. A communication was read from State Senator Henry B. Kane denying our request for a hearing on the bill revising the health laws of the state. A communication was read from Dr. Arthur T. Jones, Secretary of the Rhode Island State Committee of National Defence, Medical Section, asking the Association to lend its influence towards the passage of the Owen Bill, Senate 3748, and the Dyer Bill, House of Representatives 9563, which bills create advance rank for officers of the Medical Corps. The following resolution was thereupon passed:

Resolved, That the Providence Medical Association of Providence, Rhode Island, express its approval of the Owen Bill, Senate 3748, and the Dyer Bill, H. R. 9563, creating advance rank for officers of the Medical Corps, and that this Association urgently prays that these bills may. be enacted into law.

It is further Resolved, That this Association communicate, through its Secretary, the action of this Association to the Senators and Representatives from this state urging them to use their best efforts to see that these bills are enacted into law.

A communication was also read from the American Medical Association urging the support of our Association for the Owen and Dyer bills now before Congress.

Dr. P. Williams and Dr. H. G. Partridge, the committee appointed to draw up a suitable memorial on the death of Dr. Frank E. Burdick, presented the following memorial:

For the first time in the history of the Providence Medical Association we are called upon to record the death of the President while in office.

On December 26, 1917, Dr. Frank E. Burdick, President of the Association, died suddenly from angina pectoris at his home, 755 Broad street, Providence.

Dr. Burdick was born in Fernwood, Oswego County, N. Y., March 31, 1871, the son of Brayton D. and Mary Perry Burdick. His preparatory education was obtained in the Pulaski Academy, at Pulaski, N. Y., and he graduated in medicine at Syracuse University in the class of 1895. After serving an interneship in St. Joseph's Hospital, Syracuse, he located in Providence in 1897 and has practiced general medicine since that time.

For many years he was physician to the Medical Out-patient Department of the Rhode Island Hospital, later being appointed Assistant Visiting Physician to the House. He was also Visiting Physician to the St. Elizabeth Home. He was a member of St. John's Commandery, Knights Templar, Aleppo Temple, A. A. O. N. M. S., the Foresters, the Odd Fellows and the University Club.

He married, in 1898, Miss Lena G. Goodspeed of Providence, who died in 1900. He leaves his father, mother and one brother, all living in New York.

Unassuming and modest, Dr. Burdick was known intimately by comparatively few of his colleagues, but was respected and honored by

all. He was a conscientious physician, studious and painstaking, and most thorough in his work, and he impressed all with ability and sound common sense. Although it was known to only a few of his closer friends, he was most charitable and gave freely of his time and skill to those in need. The Providence Medical Association desires to spread upon its records this memorial, and expresses to the family its deep sense of sympathy in their bereavement.

For the Association,
P. Williams,
H. G. Partridge,
Committee.

The first paper of the evening, entitled "Perforating Gastric and Duodenal Ulcer," was read by Dr. Arthur Hollingworth. The discussion was opened by Dr. J. B. McKenna, who emphasized certain points brought out by the reader in his paper, and called attention to Moynihan's clear description of the condition. He also advocated the use of the Fowler position.

The discussion was continued by Dr. F. E. Coughlin, who advocated the use of salt solution by rectum and also the Fowler position. He also reported five cases of acute and chronic ulcer on which he had recently operated.

Dr. Leonard reported a case of probable perforating ulcer, which resulted fatally in 1897. Operation was not performed in this case. The discussion was further continued by Dr. Chapman, who advocated excision of the ulcer followed by posterior gastro-jejeunostomy. He also advocated speed in the operation and the use of salt solution.

The discussion was further continued by Dr. E. B. Smith, who stated that the condition is not serious if promptly operated and drainage established. He advocated the Fowler position on a Gatch bed and the use of rectal water. He does not advocate gastro-jejeunostomy at the time of acute perforation.

The discussion was closed by Dr. Hollingworth.

The second paper, entitled "Epidemic Cerebrospinal Meningitis," was read by Dr. William H. Jordan. This paper was discussed by Dr. Frank T. Fulton, who emphasized the importance of early diagnosis. In early diagnosis, the prognosis is good; in late diagnosis, the prognosis is bad.

The meeting adjourned at 10:35 p. m.
A collation was served.

Charles O. Cooke, *Secretary.*

Kent County Medical Society.

The regular meeting of the Kent County Medical Society was held in the rooms of the District Nurses' Association at Riverpoint, R. I., February 14, 1918, at 4 p. m. Dr. Harry S. Bernstein, State Pathologist, gave an interesting talk on "The Control of Diphtheria." Dr. Tefft of Arctic, one of the committee appointed to attend the annual meeting of the District Nurses' Association, gave a brief outline of the proceedings of that meeting.

James M. Bodwell, *Secretary.*

Woonsocket District Medical Society.

The regular meeting of the Woonsocket District Medical Society was held at the office of Dr. W. C. Rocheleau, February 21, 1918, at 8:30 p. m. The minutes of the previous meeting were read and approved. It was voted to abolish the by-law regarding contract practice. It was voted that the Secretary communicate with the Secretary of the Rhode Island Medical Society in an endeavor to establish, through an act of the Legislature, a State Industrial Accident Board similar to the one established in Massachusetts.

It was voted to suspend the by-laws, and the Secretary was instructed to cast one ballot electing to membership Drs. W. A. Bernard, Thomas S. Flynn and A. H. Monty. It was voted to suspend the by-laws and that the next meeting be held the third Thursday in March at 8:30 p. m. at the office of Dr. E. D. Clarke. It was voted that the resolutions regarding the death of our President, Dr. W. W. Browne, which were drawn up by a special committee composed of Drs. O. B. Gilbert, J. A. King and J. E. Tanguay, be inscribed in the records of the meetings of this society. Adjourned at 10:30 p. m.

E. F. Hamlin, *Secretary.*

HONOR ROLL.

Lieut. Edward Mulligan, M. R. C., U. S. A.
Capt. Herman C. Pitts, M. R. C., U. S. A.
Lieut. John L. Sly, M. R. C., U. S. A.
Capt. Allen A. Weeden, M. R. C., U. S. A.

HOSPITALS

RHODE ISLAND HOSPITAL.

Dr. Charles Lynch, who has a lieutenant's commission, M. R. C., has reported for duty at Harrisburg, Miss.

The following new internes have reported for duty to fill vacancies on resident staff: Drs. Owen Cameron, John McNamara, J. A. C. Gabriels.

Drs. Henry Brown and Edward S. McLaughlin commence their regular appointments as internes April 1, 1918.

Dr. Leon S. Gilpatrick finishes his regular internship April 1, 1918.

The Medical Advisory Boards meet daily at 12 noon at the new out-patient building and examine from 50 to 100 applicants.

Friends of the hospital have purchased and given to the hospital a mechano-therapeutic apparatus.

Alterations in the old out-patient building are nearing completion, and the ear, nose and throat, gynecological, genitourinary, dental, social service and record departments are being enlarged, renovated and fitted with modern equipment.

PROVIDENCE CITY HOSPITAL.

Lieutenant Stephen J. Dalton, M. R. C., has been ordered to active duty in Porto Rico, and left the hospital March 8.

Lieutenant Joseph Bellotti, M. R. C., has been ordered to active duty, and left the hospital March 11.

Dr. D. L. Morrissey went on duty as house officer on March 8.

ST. JOSEPH'S HOSPITAL.

There have been ten physicians appointed to the newly organized associate staff.

MISCELLANEOUS

Dr. William McDonald, Jr., is in Halifax, N. S., acting as consultant in nervous and mental cases following the explosion.

Dr. Charles S. Christie of Riverpoint, R. I., who enlisted in the M. R. C. as a lieutenant, was promoted to be a captain, and has recently been made a major.

VOLUNTEER MEDICAL SERVICE CORPS.

For the purpose of completing the mobilization of the entire medical and surgical resources of the country, the Council of National Defense has authorized and directed the organization of a "Volunteer Medical Service Corps," which is aimed to enlist in the general war-winning program all reputable physicians and surgeons who are not eligible to membership in the Medical Officers' Reserve Corps.

It has been recognized always that the medical profession is made up of men whose patriotism is unquestioned and who are eager to serve their country in every way. Slight physical infirmities or the fact that one is beyond the age limit, fifty-five years, or the fact that one is needed for essential public or institutional service, while precluding active work in camp or field or hospital in the war zone, should not prevent these patriotic physicians from close relation with governmental needs at this time.

It was in Philadelphia that the idea of such an organization was first put forward, Dr. William Duffield Robinson having initiated the movement resulting in the formation last summer of the Senior Military Medical Association with Dr. W. W. Keen as president—a society which now has 271 members.

Through the Committee on States Activities of the General Medical Board the matter of forming such a nation-wide organization was taken up last October in Chicago at a meeting attended by delegates from forty-six States and the District of Columbia. This committee, of which Dr. Edward Martin and Dr. John D. McLean—both Philadelphians—are respectively chairman and secretary, unanimously endorsed the project. A smaller committee, with Dr. Edward P. Davis of Philadelphia as chairman, was appointed to draft conditions of membership, the General Medical Board unanimously endorsed the committee's report, the Executive Committee—including Surgeons General Gorgas of the Army, Braisted of the Navy, and Blue of the Public Health Service—heartily approved and passed it to the Council of National Defense for final action, and the machinery of the new body has been started by the sending of a letter to the State and county committees urging interest and the enrollment of eligible physicians.

It is intended that this new corps shall be an instrument able directly to meet such civil and

military needs as are not already provided for. The General Medical Board holds it as axiomatic that the health of the people at home must be maintained as efficiently as in times of peace. The medical service in hospitals, medical colleges and laboratories must be up to standard; the demands incident to examination of drafted soldiers, including the reclamation of men rejected because of comparatively slight physical defects; the need of conserving the health of the families and dependents of enlisted men and the preservation of sanitary conditions—all these needs must be fully met in time of war as in time of peace. They must be met in spite of the great and unusual depletion of medical talent due to the demands of field and hospital service.

In fact, and in view of the prospective losses in men with which every community is confronted, the General Medical Board believes that the needs at home should be even better met now than ever. The carrying of this double burden will fall heavily upon the physicians, but the medical fraternity is confident that it will acquit itself fully in this regard, its members accepting the tremendous responsibility in the highest spirit of patriotism. It will mean, doubtless, that much service must be gratuitous, but the medical men can be relied upon to do their share of giving freely, and it is certain that inability to pay a fee will never deny needy persons the attention required.

It is proposed that the services rendered by the Volunteer Medical Service Corps shall be in response to a request from the Surgeon General of the Army, the Surgeon General of the Navy, the Surgeon General of the Public Health Service, or other duly authorized departments or associations, the general administration of the Corps to be vested in a Central Governing Board, which is to be a committee of the General Medical Board of the Council of National Defense. The State Committee of the Medical Section of the Council of National Defense constitutes the Governing Board in each State.

Conditions of membership are not onerous and are such as any qualified practitioner can readily meet. It is proposed that physicians intending to join shall apply by letter to the Secretary of the Central Governing Board, who will send the applicant a printed form, the filling out of which will permit ready classification according to training and experience. The name and data of applicants will be submitted to an Executive Committee of the State Governing Board, and the final acceptance to membership will be by the national governing body. An appropriate button or badge is to be adopted as official insignia.

The General Medical Board of the Council of National Defense is confident that there will be ready response from the physicians of the country. The Executive Committee of the General Medical Board comprises: Dr. Franklin Martin, Chairman; Dr. F. F. Simpson, Vice-Chairman; Dr. William F. Snow, Secretary; Surgeon General Gorgas, U. S. A.; Surgeon General Braisted, U. S. Navy; Surgeon General Rupert Blue, Public Health Service; Dr. Cary T. Grayson, Dr. Charles H. Mayo, Dr. Victor C. Vaughan, Dr. William H. Welch.

In Memoriam

Ramon Guiteras.

By Augustus O. Bourne, Esq., New York City

It is somewhat unusual, I believe, for a lawyer to address the members of this distinguished association. But, I claim the privilege of saying a few words with respect to an illustrious member, the late Ramon Guiteras. I take the liberty of speaking personally of him by that name, because for over a quarter of a century he has been my neighbor and my friend.

When on December 13, 1917, the messenger who calls us all to the higher and brighter life, summoned him, he found him, doubtless as he would have wished it, an acknowledged leader in his profession, at an operating table, in his favorite hospital, in the performance of his duty in helping the cure of the sick and the maimed.

Dr. Guiteras was born in Bristol in 1858. Nature beautifully endowed him. His father was a celebrated Castilian statesman, and his mother was a favorite New England beauty. She was a member of that old aristocratic Wardwell family, whose members have for almost two hundred years been identified with everything great and good tending to raise the standard of life in New England. She transmitted to her son traits and character that come from a long line of distinguished Puritan ancestors. And through his father we can trace his pedigree to numerous notable Castilian grand-sires. So like all remarkable men he was born and endowed at birth with brilliant abilities, receiving great gifts

from his father's loins and his mother's milk. And it can thus well be said that he was the best fruits of two lines of illustrious progenitors.

He was a tall and commanding man, towering above all his companions with a magnificent head, strong face, grave and serious expression and large, blue, kindly eyes. He was a typical example of the type of man who enriches, strengthens and elevates the standard of the profession he loved. His manners were genial and an ornament as early back as when he took his schooling at Mowry and Goff's in Providence; they followed him during his four years at Harvard College, his three years at the Harvard Medical School, his graduate work at the College of Physicians and Surgeons in New York city and at Vienna University, Austria. While I speak of him, I am reminded of the bright dreams and gleams and illusions of boyhood he cherished and—which for most of us sparkle on the threshold and brighten all the rest of our lives; lightening our burdens and helping us to forget our woes—the joyful remembrances and lovely friendships that lighten us on our way.

The influence of his genius, character, and conduct were such that soon after his returning from Vienna to New York city to enter upon his famous career, he was invited to a professorship at the Post-Graduate Hospital. And thus he had an opportunity to exert those indomitable powers upon young men from every part of the world who had the good fortune to be able to listen to his lucid expositions and demonstrations of medicine in his special branches of research.

Soon after settling in New York city his sterling work advanced him to the top of his profession—paddling his own canoe and with a sturdy, steady stroke, keeping a sound mind in a sound body, and back of them exhaustless energy. These qualities he possessed and used throughout his life most effectively.

In recognition of his professional worth, he was elected an honorary member of this distinguished association, a member of the American Urological Association; President of the Pharmaceutical Society; President of the Spanish American and Latin American Medical Association. And just before his passing he was elected President of the Military Aid Society, an association of members from your profession pledged to render free medical service to boys injured in our cause of liberty. He was surgeon of the African Hunting Club. That is an association of notable travellers and big game hunters. Twice he took the Roosevelt trip through Africa. It is said of him that during these hunting trips all recognized in him the best hunter, the surest shot and the leader of the party in times of danger.

Then also, in return for the help his medical instructors had given him in his teaching days, and reward for the honors bestowed on him by his professional brothers, no less than his desire to instruct young practitioners in his special science, he gave the world two volumes in 1912.

His was a mind possessing unusual power, magnetism and the wonderful gift of persuading and influencing men. And these powers were used naturally and without affectation or consciousness of special excellence. He spent them as freely as he received them for the benefit of his fellow men. Wherever he came, he always brought light, and warmth, and sympathy, which seemed to follow him whether he spoke or was silent. And then with that splendid constitution he inherited from his ancestors his working hours were prodigious. And as he had given no hostages to fortune in the shape of a wife and children, he was always ready and able to serve his patients and the cause of the sick with relentless devotion.

His social clubs were the best in New York city, the Union, Brook, Players, New York Yacht, New York Athletic and the African Hunting. And as to friends, I think he had more friends in New York city and in this country than any man I ever knew. He had a genuine instinct for friendship. Broad sympathies which enabled him to touch human relations in more points than other men. All the people he knew became his friends.

For years he had been attached to the staff of the French Hospital. And as senior member of the staff of the Italian Hospital, his services were such that the Imperial Italian Government decorated him with a gold medal. These were but one of many foreign tokens of respect and regard which he received during his medical career. And others who possess the necessary professional qualifications to judge will be able to tell you how much he has done to elevate the standard and dignity and the value of his profession. And all you are aware how proud the Rhode Island Medical Society was in being associated with this distinguished urologist.

In looking back over the career of our deceased friend, we are moved by the tender solicitude he exhibited for his profession, the faithful services he rendered the sick and the poor, and the generous teachings of young students of the medical sciences, but the most outstanding fact in his distinguished life was his notable manhood. All who have had the honor of his acquaintance could truthfully say "He was every inch a man."

UNIVERSAL MILITARY TRAINING.

Resolutions Adopted by the State Committees of the Medical Section, Council of National Defense Held in Chicago October 23, 1917.

Whereas, The experience through which the United States is now passing should convince every thoughtful person of the necessity for the universal training of young men, not only for the national defense in case of need, but also to develop the nation's greatest asset—its young manhood—in physical strength, in mental alertness, and in respect for the obligations of citizenship essential in a democracy; therefore be it

Resolved, by the State Committees of the Medical Section of the Council of National Defense that they strongly urge the adoption by our government at this time of a comprehensive plan of intensive universal military training of young men for a period of at least six months, upon arriving at the age of nineteen years; and that this body also support the movement to secure the introduction into public schools of adequate physical training and instruction;

Resolved, That the members of each State Committee immediately take active steps to insure public support for the subject of these resolutions through the newspapers, through public meetings and through the appointment of committees in each county; also that copies of these resolutions be forwarded to the Senators and members of Congress in their respective states, with a personal request that favorable action be taken at the coming session of Congress upon a measure following the principle of the Chamberlain Bill and to become operative as soon as the army cantonments are no longer required for the training of the forces in the present war;

Resolved, That each State Committee from time to time report to the Medical Section of the Council of National Defense as to action taken and progress secured in their several states.

Resolution Adopted Unanimously by the Clinical Congress of Surgeons of North America at Chicago, October 25, 1917.

Whereas, The experiences of the nation convince us of the necessity for Universal Military Training, to furnish qualified men for defense, to strengthen manhood and mental poise, and to make for a more efficient citizenship, and

Whereas, We believe it will democratize youth and furnish discipline, while developing physical force and endurance, and will produce better fathers and workers for the ranks of peace;

Therefore, *Be It Resolved,* That the Clinical Congress of Surgeons at its eighth annual session urges upon Congress at its coming session the passage of a measure along the general lines of the Chamberlain Bill for Universal Military Training, and that the cantonments now used by the National Army be utilized, if possible, for such work.

AMERICAN MEDICAL ASSOCIATION.

The Chicago Session.

Committee on Arrangements.—The Local Committee on Arrangements for the Annual Session of 1918 to be held in Chicago, June 10-14, is actively engaged in perfecting plans for the comfort and entertainment of the Fellows of the Association and their guests.

All correspondence with the Local Committee on Arrangements or with any of its subcommittees should be addressed to 25 East Washington Street, Chicago.

Clinics.—The chairman of the subcommittee on clinics, Dr. Charles F. Humiston, announces that there will be a series of clinics for the Fellows of the Association on Thursday, Friday and Saturday, June 6, 7 and 8, and on Monday and Tuesday, June 10 and 11. Further announcements regarding the clinics will appear in these columns from time to time.

Alumni and Section Dinners.—Alumni and section dinners will be held on Wednesday evening from 6 to 8 o'clock so as not to conflict with other events which are being planned. The chairman of the subcommittee on alumni and section entertainment, Dr. J. H. Stowell, announces that his committee is coöperating with officers of alumni associations in arranging for reunions. The committee desires, also, to assist the officers of those sections which desire to arrange for section dinners.

THE RHODE ISLAND MEDICAL JOURNAL

The Official Organ of the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

VOLUME II
NUMBER 5
Whole No. 119

PROVIDENCE, R. I., MAY, 1918

PER YEAR $2.00
SINGLE COPY, 25 CENTS

ORIGINAL ARTICLES

EYE STRAIN AS RELATED TO GENERAL PRACTICE.*

By Frank J. McCabe, M. D.,
Providence, R. I.

It is not without some hesitancy that I appear before you this evening to discuss the old, hackneyed and, to some of you, perhaps, uninteresting subject of eye strain or asthenopia. However, I shall ask your indulgence for a few brief minutes to remind you of facts which, because you have so many other things to keep in mind, you have long ago forgotten.

Some one has said that in modern medicine the keystone in diagnosis and treatment is "co-operation;" therefore the excuse for this contribution is an effort to direct the attention of the general practitioner to a field of real helpfulness on the part of the ophthalmologist.

By eye strain, or asthenopia, is meant a fatigue or weakness of the eyes with its resultant accompanying symptoms. For purposes of differential diagnosis, study and treatment the following types are recognized:

(1) Acommodative, due to errors of refraction and to strain of the ciliary muscle.

(2) Muscular, due to an abnormal condition of the extrinsic muscles of the eye.

(3) *Nervous,* due to some faulty condition of the nervous system; *reflex,* due to abnormalities in the organism outside of the eye and the nervous system.

In discussing these different types of asthenopia, it would be well to refresh our memories by reviewing briefly the anatomy and physiology of the ocular system as it relates to eye strain.

The function of the eye and its appendages is to receive impressions of objects in space and to transmit those impressions to the brain for interpretation. These impressions are produced by a stimulation of the retina by that form of energy which we call light. The ciliary muscle, or muscle of accommodation, is in almost constant activity during waking hours in its effort to clarify retinal images. This activity is particularly marked in the hyperopic or far-sighted eye, where no retinal image is clearly defined except through the action of the ciliary muscle. Myopic or near-sighted people cannot aid vision by ciliary activity, and consequently practically all retinal images in myopes are blurred. It is recognized that nearly 95 per cent. of all persons have more or less astigmatism, i. e. irregularity in the curvature of the refractive media, producing irregularly shaped retinal images, which are extremely irritating to the retina itself and also to the cerebral centers of interpretation. Low hyperopic errors are easily overcome by action of the ciliary muscles, and the effort to see better, being stimulated by fair vision, it results in muscular fatigue or hypertrophy, or both; so that a patient with 20/15 vision, which is better than the average normal vision, may be suffering greatly from eye strain; whereas in high errors of refraction, the ciliary muscle soon learns that it cannot overcome the defect, and the poor vision which results is associated with blurred images, of irregular diffusion, which persist in irritating the retina. As the great majority of both hyperopic and myopic eyes are complicated with astigmatism, we can readily see that in most cases we are dealing with a combined effect of muscular fatigue and retinal irritation.

Twelve muscles are required to balance the two eyes, so that all images will fall on corresponding retinal areas and thus maintain binocular vision. When one or more of these muscles are weaker than the others, the sense of fusion requires it to keep up with the stronger muscles in the effort to maintain binocular single vision, thereby calling forth an abnormally large amount of nerve force to these weaker muscles.

It is evident, therefore, that the reasons for eye strain are fatigue, hypertrophy, and congestion of the ciliary muscles in the constant effort

*Read before The Providence Medical Association, April 1, 1918

to produce clear vision; retinal irritation from circles of diffusion, made worse by the irregularity in the presence of astigmatism; and extrinsic muscular hypertrophy and fatigue in the struggle to maintain binocular single vision.

Of the cranial nerves, the second, third, fourth and sixth are devoted wholly to the eye and its appendages, while the fifth is concerned with sensory functions. The second or optic, after entering the orbit, and piercing the sclecal and chriordal coats of the globe, expands to form the retina. Its function is purely visual in that it transmits to the cerebral centres of vision the exact impressions made upon the retina, through the refractive media of the eye. The third nerve, or motor oculi, sends voluntary motor fibres to all the extrinsic ocular muscles, except the superior oblique and the external rectus. While passing through the cavernous sinus, it receives a few sensory fibres from the ophthalmic division of the fifth nerve and a definite anastomosis from the cavernous plexus of the sympathetic. The branch of the third nerve, which supplies the inferior oblique muscle, gives off a twig, which is the motor root of the lenticular ganglion.

The fourth nerve is the motor nerve of the superior oblique muscle, and, like the third nerve, has an anastomosis with the sympathetic from the cavernous plexus, and also receives sensory fibres from the first or ophthalmic branch of the fifth nerve.

The sixth nerve supplies the external rectus muscle and receives its sympathetic fibres from the carotid plexus. The first division of the fifth nerve, which is given off from the Gasserian ganglion, is purely sensory and is called the ophthalmic nerve. It receives sympathetic fibres from the cavernous plexus and has three branches: (1) the lacrymal, which enters the lacrymal gland and anastomoses with the orbital branch of the superior maxillary and with the facial nerves; (2) the frontal, divides into the supartrochlear and the supra orbital, and is distributed to the forehead, eyelids and scalp, and communicates with the infratrochlear and the facial nerves; (3) the nasal has several branches: those of importance in this discussion are the ganglionic, which enter the lenticular or ciliary ganglion to form its sensory root, and the long ciliary nerves (2 or 3) which pierce the sclera near the optic nerve and pass forward in the eyeball to be distributed to the ciliary muscle and iris. The nasal also sends sensory fibres to the conjunctiva, caruncle, lacrymal gland, the upper lid, forehead and the root of the nose and also to the nasal septum and turbinates and to the tip of the nose.

The ciliary ganglion has three roots,—a motor, from the motor oculi nerve; a sensory, from the nasal branch of the first division of the fifth, and a sympathetic root, from the cavernous plexus. The ciliary ganglion gives off ten or twelve short ciliary nerves, which pass forward through the sclera and the choroid and are distributed to the iris and ciliary muscles.

The sympathetic system consists of two great gangliated cords extending the whole length of the vertebral column. The two cords are connected above with two plexuses which enter the cranium and unite with the fifth cranial nerves; below, they are joined together in a loop over the coccyx. Each ganglion has an afferent and and efferent connection with the anterior division of the corresponding spinal nerve. This extensive system, through its ganglia and series of plexuses, provides a switchboard connection between the various organs, and it is supposed that a sympathetic relation is thus maintained between different organs. The chief functions of the sympathetic nerves are vaso-motor, trophic, secretory and control of smooth or involuntary muscles. Thus it can be easily seen what close relations there are between the motor and sensory supply of the ocular mechanism and the sympathetic system.

The most common form of asthenopia is the accommodative, and in all cases this must be ruled out before the other types can be diagnosed. We are told that nearly every child is born hyperopic (i. e., far sighted), due to a small, short eye with more or less flat surfaces. As the child grows and uses his eyes, they gradually elongate and the surfaces become more convex, until at a certain time we may get an emmitropic or normal dioptric apparatus; or it may elongate too much, then we get myopia or near sightedness. This is the case among those who use their eyes a great deal for near work. It is said to be a sign of civilization, as savages and lower animals are nearly all far sighted.

One of the most difficult things to understand in the study of the effect of errors of refraction upon the human organism is the widely varying results produced by the same error upon different individuals. Many eyes are very tolerant; most people have demonstrable errors of refraction of

which they are unconscious; many of those who become conscious of such errors remain comfortable when the spectacle frame becomes bent, when a spherical glass is tilted so as to produce an astigmatic effect, or when the axis of a cylindrical lens is altered several degrees, and such patients may obtain satisfaction from anything like a fair approximation to their true correction.

This fact has had great weight in perpetuating the idea that accuracy in the fitting of glasses is not of such great importance after all. But many eyes are intolerant to even a very slight error of refraction, or to a little variation of the correcting lens from its proper position. Patients with such eyes are apt to complain of headache, not associated with any symptoms which can be termed distinctly ocular, can be persuaded with difficulty to have their eyes examined at all, and yet are often completely relieved by a very weak glass, especially if the error is astigmatic. As you all know, the most common symptom of eye strain is headache, which may be frontal, occipital or temporal, and usually appears after close work. It is said that eighty per cent. of all headaches are due to eye strain. Many years ago, Weir Mitchell pointed out that "asthenopia may be revealed solely by occipital or frontal headache, there being no pain in or about the eyes and no sense of fatigue locally, but if such strain be allowed to continue for a long time, it may cause insomnia, vertigo, nausea and general ill-health." The pain may be frontal, ranging all over the forehead, or bitemporal, or it may be worse in the occipital or vertical regions. Other symptoms are pain, fatigue, burning and smarting of the eyes, blurring of the vision, feeling of sand in the eyes, lacrymation, photophobia, fibrillary tremor of the orbicularis, twitching, migraine, digestive disturbances and nervousness.

As a result of asthenopia, we often see conjunctivitis, blepharitis, styes, chalazia, also a congestion of the retina and choroid.

In a fairly large minority of cases of eye strain, the symptoms are due to an unbalance of the extrinsic muscles of the eye. However, its presence can be demonstrated in many persons who have no symptoms of asthenopia, and also in many who have asthenopia from other causes. In such cases, the imbalance must be compensated for physiologically, or it must be physiological, according to Roemer, else it is itself a symptom of some other abnormal condition, in which case attention must be paid to the underlying causes. In many such cases we are dealing with tendencies to inco-ordination accompanied by ocular symptoms of unbalanced nerve action rather than with demonstrable lesions of the muscular or nervous systems; therefore, every condition of the organism which may disturb the nervous equilibrium, whether in the eye or not, should be investigated, and its bearing on the individual case studied. An imbalance of the muscles frequently passes away, or is physiologically compensated for, when the glasses that correct an error of refraction are constantly worn, and it is well known that both mental and physical factors affect the nervous equilibrium and thereby the balance of the muscles. Besides these cases, there remains a goodly number in which the imbalance is not symptomatic and is not compensated for, but is a primary condition, productive of trouble which needs correction.

The intimate relations which exist between the eye and all other parts of the body cannot be emphasized too strongly. The connection between the eye and a viscus situated in the abdomen, through the nervous, circulatory and lymphatic systems, is just as close as that between any other two separate organs, i. e., the eye reacts to troubles situated in distant parts, and other organs react to troubles in the eye. Persons suffering from overwork, worry, anemia or general debility, who complain of eye strain, show the result of a general nervous irritation.

Nervous asthenopia may be a symptom of a grave nervous disease. Reber of Philadelphia reported a case in which asthenopia seems to have been the *first* symptom of tabes, with the reflex immobility of the pupil the next. This type of eye strain is frequently found in so-called cases of neurasthenia and in hysteria. O'Connor describes a number of such cases which were quickly and permanently relieved by the proper fitting of glasses.

Sometimes we can trace the etiology of an asthenopia to an irritative or an inflammatory condition in one or more of the abdominal organs or to an abnormal condition in the nose or accessory sinuses, and also in some cases of menstrual disorders, and in renal disease.

The physician not infrequently is confronted with the difficult problem of determining the active underlying cause of a given condition which he is called upon to treat. It is not an easy matter to establish a definite causal relation

in every case; especially is this true of conditions that are to be attributed to some remote reflex irritation. The so-called functional disorders of the gastro-intestinal tract, when no organic changes can be recognized, in the absence of acute or chronic inflammation, must be considered of reflex origin and not infrequently the visual apparatus may be the offending organ.

Irritability of the stomach, loss of appetite, dyspeptic symptoms after the ingestion of food, regardless of the nature of the food, dizziness, nausea and vomiting are often caused by eye strain.

Dizziness, as a symptom of some ocular defect, is very common, and is frequently attributed, by the patient as well as by the attending physician, to some gastric disturbance, there being no ocular symptoms present. This form of dizziness is always aggravated by an overloaded stomach, which condition, if continued, calls for local treatment, dietetic as well as medicinal, but to effect a cure the ocular defect must be corrected. Nausea as a result of some eye disturbance is not an infrequent condition; it is observed in many of the inflammatory conditions of the eye, such as iritis and glaucoma, and also in cases of errors of refraction and in muscular imbalance.

Nausea is very often followed by vomiting and is usually associated with vertigo. Persistent vomiting may be caused by errors of refraction, especially of the mixed astigmatic type. The symptoms often may be of such a severe nature as to simulate a cerebral lesion. Gastro-intestinal symptoms of ocular origin are especially observed in children during the period of school life; these children suffer from headache, dizziness, nausea and vomiting and are compelled to lose valuable time on this account. In such cases, it is extremely difficult to convince parents that their children need glasses, especially as the children state that they can see perfectly well.

Mechanical pressure in the nose, where a turbinate presses upon the septum, is often a cause of ocular symptoms, even when the patient states that he has absolutely no trouble with his nose. Correction of the difficulty gives great relief.

In concluding, I wish to emphasize one important point, namely: when symptoms of malfunction of one organ or system persist after treatment of all obvious disorders, it is not fair to ascribe the condition to nervousness, hysteria, idiosyncracy or what not, or even to call it obscure, until the function of every other organ has been studied and corrected. The constant use of the eyes during waking hours, and the demand for and frequently great waste of nerve force in their use, call for a careful ocular correction in all cases of functional disorder, possibly due to some reflex irritation.

With your permission, I wish to cite the following cases which I have seen recently:

Case 1. T. P., a husky looking young man, who complained of severe headache, dizziness, and vomiting after each meal, regardless of what he ate. He had been treated by three physicians, but his stomach symptoms did not improve. He was referred to me to see if he needed glasses. Examination showed no heterophoria, external eye negative and fundi, fuzzy, but nothing pathological, vision 15/30 o. u. Refraction under a cycloplegia showed mixed astigmatism. Glasses were ordered and patient told to return in two weeks; he stated on his return that he had not vomited for more than a week and was able to eat anything without distress.

Case 2. M. H., age 22 years, clerk. Has had severe pain in and about eyes for nearly two years, also frontal headache, sometimes so severe that he was obliged to give up work for the day. Had several pairs of glasses, but without much relief. Muscle test showed him to have a right hyperphoria of 3 degrees (right eye tended to deviate upward) combined with hyperopic astigmatism. Appropriate glasses for his asthenopia with prisms (right base down, left base up 1 degree) gave him immediate relief.

Case 3. M. B., girl, 17 years, student. Her mother stated that the girl had not been well for two or three years; that she had nervous indigestion, etc. The girl was irritable, remained by herself a good deal of the time; was so nervous that she wept in school frequently. Refraction with appropriate glasses cleared up her indigestion and made her a happy, congenial girl.

Case 4. E. C., boy, 10 years old. Was in class for backward children. Teachers told his mother that his mind was not "developed enough for him to learn in school." His mother said that he was bright enough at doing everything but his school work. Refraction followed by appropriate glasses improved his mental development to such an extent that within three months he was put into the grades and, according to his teacher, he seemed to learn as well as any of the other children.

A REVIEW OF ONE HUNDRED CONSECUTIVE CASES OF ACUTE DISEASES OF THE APPENDIX, GALL BLADDER, DUODENAL AND GASTRIC ULCERS WHICH HAVE COME TO OPERATION.*

By Frederick V. Hussey, M. D.,
Providence, R. I.

On looking over the records of the cases on which this paper is based, I have been very much impressed with what seems to me to be a serious failure of the general physician in the treatment of many cases of appendiceal and gall bladder disease and ulcer of the stomach and duodenum. The general surgeon is in a very good position to determine the results of preliminary medical treatment in acute conditions of the stomach, duodenum, gall bladder and appendix; he sees the conditions at the time of operation and knows the exact state of affairs which exists. I think in most instances the fault lies, not in the man's lack of knowledge, but in his lack of courage—his reluctance to advise radical measures in the beginning, without first trying out some of the older methods of treatment, which brings his patient into an extreme condition. This reluctance, of course, oftentimes is promoted by the patient's desire to avoid operation, if possible, and only to submit to it when the trouble has become so serious as to make every other method of treatment out of the question. An operation should be used simply as a means to an end, and it should be advised at the time it promises the best results. It should never be postponed, without very good reason, until it has become a method of last resort, if we hope to obtain the results that we should in this class of acute cases.

In going over these one hundred histories, the figures I have been able to obtain are not as satisfactory as I had hoped they would be, owing to the fact that many important points in the histories were not brought out. This has often been due to the negligence of inexperienced men, young internes, who have taken the histories and who have not been awake to the importance of eliciting certain symptoms leading up to the acute condition, and as a consequence there is a great lack of detail in some cases as to the exact condition and exact sequence of symptoms covering a considerable length of time previous to the acute illness for which they were admitted to the hospital for treatment.

Of the hundred cases selected, there were 76 cases of acute and 2 cases of sub acute appendicitis, 16 cases of acute gall bladder disease, 5 cases of acute perforated gastric ulcer, and 1 case of acute perforated duodenal ulcer. Of the 78 cases of appendicitis, 23 were of the acute catarrhal type; 22 of these were operated on with no mortality; 2 refused operation and went home well from the attack. None of these cases were drained, and the average time in the hospital for each case was about 12 days. There were 46 cases of acute gangrenous appendicitis, all of which were drained, and of which 3 died, giving a mortality of 6½ per cent. There were 7 cases of the acute suppurative type, with drainage, and no mortality; and 2 cases of the sub acute type, and no mortality. The average length of time in the hospital for each drained case was in the neighborhood of three weeks. According to the records, 37 of the 78 cases had had one previous acute attack, and 20 of them had had more than one, and these attacks had been spread over a time varying from one week to eleven years. I feel that the number of cases reported as having had one or more previous attacks is smaller than it should be, as some of the histories very plainly did not take up that point. Many of the patients had been given cathartics of various kinds early in the attacks. The day of the attack on which the patient was admitted to the hospital varied from the first to the twenty-first, the average being the fourth day. The excess of time in the hospital of the 53 drained cases over what it should have been had they been clean was approximately 530 days, or about 10 days to each case.

Now, what do the above figures mean? Let us first sum up what is considered to be the most efficacious method of treatment of these acute cases. First, rest in bed; second, starvation diet; third, no catharsis; fourth, ice locally; and fifth, as soon as the diagnosis can be made, operate, unless there are very clear contra indications. It has been the experience of practically all surgeons that this line of treatment has been the cause of the tremendous drop in the mortality of acute appendicitis in the last ten years. After operation in conjunction with the Fowler position, the Murphy saline drip has been very efficacious in drained cases following operation.

*Read before The Providence Medical Association, April 1, 1918

Four points stand out very plainly from the figures quoted; first, the large number of cases having had previous acute attacks or previous symptoms of chronic inflammation; second, the frequent use of catharsis in the initial stages; third, the comparatively late day of the sickness on which they were admitted to the hospital for operation; and fourth, the much longer stay in the hospital of the drained cases over the clean.

It would seem that, in spite of all that has been written, the lesson has not been well learned. Undoubtedly some cases refuse operation during the first attack, or they may have wished to delay operation until the seriousness was all too obvious; but, on the other hand, was a conscientious attempt always made by the physician to make the patient see the seriousness of the trouble from the very beginning? Were not some carried along by palliative measures, in the hope that the attack would subside, and operation be avoided, until it was too late to have a clean operation? In other words, do not many of us to-day fail to impress on our patients the seriousness of the condition, both as regards the present attack and the risk of those to come? Also, are we alive to the frequency of chronic appendiceal trouble as the cause of long standing indigestion, which finally breaks out in the typical acute attack? All of this sounds old, yet I daresay the truth of it will be borne out by reference to the records of any general hospital. Again, many physicians continue to physic their patients at the beginning of any acute abdominal condition without first having made a sound and accurate diagnosis, and, in many instances, even after a diagnosis has been made. This is a method of treatment which cannot be defended in the light of the experience of the best men. It undoubtedly has had much to do with the aggravation of symptoms in many cases and their progression to a much worse condition. Also, we find that instead of getting these patients into the hospital for an early operation when conditions are most favorable for a clean operation, they are being admitted fairly late, when drainage is necessary, with a rather long, tedious, painful convalescence, with conditions more favorable for such complications as secondary abscess formation, obstruction from adhesions, paralytic ilius from peritonitis, and so forth. We find that the drained cases are detained much longer in the hospital and are much longer in getting back on their feet after leaving the hospital than the clean cases. This last point is of considerable economic value. The laboring man is subjected to greater hardship and the expense for care of the patient in the hospital is greatly increased. It seems to me there is a great loss of time and money due to our failure, in many instances, to take a firm stand at the beginning.

Of gall bladder cases there were 16; 7 were cases of acute cholecystitis with gall stones; 1 of acute cholecystitis without gall stones. There were 5 cases of empyema with gall stones and 1 of empyema without gall stones; there were 2 cases of gall stones with symptoms of sub acute cholecystitis; 13 cases were operated on with a mortality of 5; 2 died from causes which could not be controlled, 1 from pulmonary embolus, 1 from intestinal hemorrhages when about to leave the hospital, and which at autopsy were shown to have come from an ulcerated condition of the ascending and transverse colon. The other three cases that died were cases of severe empyema in which only a simple cholecystostomy and drainage had been done. Of the 16 cases, 12 had previous symptoms, either in the form of acute attacks of colic or long standing indigestion. In 4, no history of previous trouble was obtained. Only in 3 was there jaundice. The duration of the symptoms varied from three weeks to twenty years.

Here, again, the outstanding feature was the length of time these cases had been allowed to drag along, frequently presenting symptoms of their condition and yet not coming to operation until in the midst of a serious acute attack, when an operation was rather imperative and the time most unfavorable. All of the cases showed symptoms enough to make a diagnosis of their condition before the acute attack for which they were operated. If the time for operation had been chosen during some previous quiescent period, it is only fair to presume that the mortality would have been very much lower than it was—23 per cent.—excluding the two cases that died from extraneous causes. Here again the most pronounced feature was the failure of the physician to grasp the seriousness of the condition and the tendency to delay until disaster actually occurred.

Of the cases of ulcer there were six—five of gastric ulcer and one duodenal. The five cases of acute perforated gastric ulcer were operated on, with one death following a secondary operation for gastric fistula which formed after the

first operation for closure of the ulcer and drainage.

Death occurred in the perforated duodenal ulcer which was not operated on because of the patient being in a moribund condition at the time of admittance to the hospital. There was a mortality of 20 per cent. in the operated cases and 33 1-3 per cent. in all. Five cases gave a definite history of previous trouble, and the duration was from three weeks to eight years. Here again we have a failure to make a definite diagnosis and to advise proper treatment.

In stomach, gall bladder and duodenal trouble there still seems to be a tendency among many of us to treat the symptoms of indigestion or dyspepsia without grasping the fact that any long continued or recurring indigestion has some underlying organic cause for its existence. There is still the failure to use all our means of diagnosis to clear up the situation, and if in spite of it all we cannot then make a definite diagnosis, there is still the hesitancy to advise an exploratory operation in these long standing conditions.

We know that the normal rate of mortality in operations for appendicitis should be practically nil when done at the most favorable time, and that in diseases of the gall bladder and ulcers of the stomach and duodenum it should not be much over 3 to 4 per cent. If we will only take a more determined stand, get at the bottom of the trouble and not only advise but insist on appropriate treatment before our cases get into such a condition that we are obliged to operate on them when the risk is greatest, we will be able to save many of them that we now lose. The trouble is not with the operation, and it is not that many of these cases are unusually sick, but it is that we allow them to get into a serious condition before we send them in for operation; it is that we delay appropriate measures until what is essentially a safe method becomes an unsafe one because of the progression of the disease. If we know that early operation will save more patients, why not insist on it when any particular case is in its early stages? If the few figures I have given above mean anything or carry a lesson to us, it is that delay and not operation has killed many patients and in many others has caused a long, painful convalescence with unsatisfactory after results.

IN MEMORIAM.

Capt. Peter L. Keough, M. D., M. R. C., U. S. Army.

The medical profession of Rhode Island has suffered its first war casualty in the untimely death of Dr. Peter L. Keough of Pawtucket. Dr. Keough was commissioned a Lieutenant in the Medical Officers' Reserve Corps shortly after our entrance into the war and soon won his Captaincy. While on duty at Camp Sherman, Chillicothe, Ohio, he contracted pneumonia, which rapidly proved fatal on April 15.

The profession mourns his death and extends to the bereaved wife and family heartfelt sympathy. His sacrifice of home ties, of profession and, supreme to all, his life for his country's service is at once an inspiration and a grief to us all. May the consciousness of his patriotic service well done be balm to those who mourn his passing. For him

"The strife is o'er, the battle done,
The victory of life is won."

WAR DEPARTMENT.

Office of the Surgeon General. Washington.

1. Attention of medical officers is directed to the provisions of paragraph 423, M. M. D.—"Medical officers will not publish professional papers requiring reference to official records or to experience gained in the discharge of their duties without the previous authority of the Surgeon General."

2. Numerous scientific papers written by officers of the Medical Department have recently appeared in the medical press without specific authority from this office. This practice will be discontinued, and the above regulation will be strictly complied with.

3. Officers desiring publication of professional papers will submit two copies to the Surgeon General with request for permission to publish same. Upon approval, a copy will be forwarded to the journal designated by the officer for publication.

By direction of the Surgeon General:

C. L. Furbush,
Lieutenant Colonel, Medical Corps, N. A.

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

SUBSCRIPTION PRICE, $2.00 PER ANNUM. SINGLE COPIES, 25 CENTS.
Entered at Providence, R. I. Post Office as Second-class Matter.

RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

JOHN CHAMPLIN	*President*	Westerly
GARDNER T. SWARTS	*1st Vice-President*	Providence
JOHN M. PETERS	*2d Vice-President*	Providence
JAMES W. LEECH	*Secretary*	Providence
W. A. RISK	*Treasurer*	Providence

DISTRICT SOCIETIES

KENT
Meets the second Thursday in each month

H. BARTON BRYER	*President*	Natick
JAMES M. BODWELL	*Secretary*	Phenix

NEWPORT
Meets the third Thursday in each month

EDWARD V. MURPHY	*President*	Newport
A. CHACE SANFORD	*Secretary*	Newport

PAWTUCKET
Meets the third Thursday in each month excepting July and August

ARTHUR H. MERDINYAN	*President*	Central Falls
CONRAD E. THIBODEAU	*Secretary*	Pawtucket

PROVIDENCE
Meets the first Monday in each month excepting July, August and September

WILLIAM F. FLANAGAN	*President*	Providence
CHARLES O. COOKE	*Secretary*	Providence

WASHINGTON
Meets the second Thursday in January, April, July and October

A. B. BRIGGS	*President*	Ashaway
W. A. HILLARD	*Secretary*	Westerly

WOONSOCKET
Meets the second Thursday in each month excepting July and August

EDWARD L. MYERS	*President*	Woonsocket
E. F. HAMLIN	*Secretary*	Slatersville

Section on Surgery—2d Wednesday in each month, Dr. F. G. Phillips, Chairman Dr. Peter P. Chase, Secretary and Treasurer.

Section on Diseases of Children—3d Tuesday in each month, Dr. Henry E. Utter, Chairman; Dr. J. S. Kelley, Secretary and Treasurer.

Section on Gynecology and Obstetrics—3d Wednesday in each month, Dr. C. W. Higgins, Chairman; Dr. E. S. Brackett, Secretary and Treasurer.

Section on Medicine—4th Tuesday in each month, Dr. D. Frank Gray, Chairman; Dr. C. W. Skelton, Secretary and Treasurer

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President, Dr. Harlan P. Abbott, President; Dr. C. J. Astle, Secretary-Treasurer.

NOTICE

The House of Delegates having voted that the dues shall be $10.00 for 1918, the Treasurer desires to call the members' attention to Article IV Sec. 6 of the By-Laws: "Every Fellow shall annually contribute the Annual dues and the same shall be due and payable to the Treasurer, January first of each year."

EDITORIALS

RHODE ISLAND AND THE MEDICAL RESERVE CORPS.

Attention has recently been called in the public press to the fact that the quota of Rhode Island physicians who have enlisted in the Medical Reserve Corps is lamentably small. It is a sad commentary that a state which has exceeded its quota in the Working Reserve, and which has stood commendably near the top in Liberty Loan and Red Cross drives, should fall to the forty-second place in such an important branch of the service as the Medical Reserve Corps. We are

unwilling to believe that this unenviable position near the foot of the class comes from any lack of patriotism in the medical profession of this state, nor from a fear that on their return from service they will find their practices dissipated and their families facing starvation. It is due rather to a failure to appreciate the fact that unless this country puts forth every ounce of its strength in all lines of endeavor, we shall be forced by a German victory to pay an indemnity beside which our present income taxes and Liberty Loan subscriptions would pale into insignificance. Another reason for failure of our physicians to enlist is to be found in the unfortunate announcement of the Adjutant General several months ago that no more commissions would be issued in the Medical Reserve Corps. It has been stated time and again that the order was issued simply to allow the office force time to catch up with its work. Corrections never receive the attention which is given to previous incorrect statements, and the idea still persists that there is no further need of physicians at present. The Surgeon General states in a letter on another page of this issue that 15,000 medical officers will be needed for an army of 1,500,000. If our army is recruited up to 4,000,000 or 5,000,000, as seems likely, it will be necessary to ask for a great many more medical men.

In commenting upon the small quota of physicians enlisted in this state, it is only fair to the profession to point out that the Rhode Island Hospital Unit contains eighteen men enlisted in the Naval Reserve Force, who would be credited to the Army Reserve Corps but for the fact that the Government requested this unit to organize as a Navy rather than an Army unit. Even so small a number as eighteen raises the percentage quite appreciably in a state where the total quota asked for is only about one hundred.

MEDICAL FACTS AND THEORIES.

The articles appearing in the *Providence Journal* under the caption Medical Facts and Theories besides being very interesting have had an educational value in combatting the preposterous claims of quackery, and proving how absurd were the statements made regarding the efficacy of widely advertised proprietary medicines.

The high esteem in which the author is held not only by the profession of the State and country but by the laity carries weight which could not be borne by a man of less ability or one who was not so well known.

The *Porvidence Journal* is to be highly commended for its courageous stand regarding the advertising of proprietary medicines and comparatively few advertisements which are evidently misleading appear in its columns.

We believe, however, that the author of Medical Facts and Theories slightly oversteps the proper boundaries when, as in the issue of April 13, he indicates by name any man actively engaged in the practice of medicine in the State of Rhode Island. Certainly he does not wish to advertise the ability of one man at the expense of his fellow practitioners or to suggest that sufferers from any disease should consult a certain man to the exclusion of others. Yet the article in question has already influenced patients to change their medical advisor and will undoubtedly affect the practice of men amply qualified to care for this class of patients. It would have been as fair in the article on Infantile Paraylsis to have said that sufferers from this disease should consult some one neurologist or orthopedic surgeon, and we are quite sure that the author did not intend to draw any invidious comparison. Yet to the laity it would appear that the names mentioned were the names of the only physicians capable of caring for tuberculosis patients.

THE END OF FRIEDMANN.

By chance, two medical journals lay, side by side, on our desk. In one was an account written by Dr. Barnes, of the end-results of Friedmann's treatment of tuberculous patients at Wallum Lake. The end-results, needless to remark, show that the loudly-vaunted vaccine had no beneficial effects whatsoever. In the other journal was the obituary of Lieutenant-Colonel John McCrae, who gave his life in devotion to the men, all of them like himself, fighting for civilization in Flanders. Here, we thought, is material for a study in contrasts which should appeal especially to us in Rhode Island, since we were actively concerned in the Friedmann business.

And the contrast—what is it? Simply this—the contrast between two opposite principles bodied forth in living flesh and blood: the principle of egoism concealed behind the outward trappings of suave talk and oily promises, and the principle of altruism, the other name of which is renunciation. Briefly, we describe them thus—

the principle of give and the principle of take. McCrae was a master of the first, Friedmann of the second. Coming amongst us with much blatant sound and fury, Friedmann signifies—nothing! Going from our midst in silence to his death, McCrae signifies—everything! And whom will you cherish in your memories? the man who capitalized—we say it advisedly—capitalized human pain and misery and sorrow, who took much and gave in return nothing, or the man who said and *meant* what he said.

"If ye break faith with us who die
We shall not sleep, though poppies grow
In Flanders Fields."

To ask the question is to answer it. Quite so, and yet we ask it; for the standing menace of our profession is the commercial spirit, while its constant support is the spirit of McCrae. Observe, we do not say the making of money in medicine is a menace, because that may be, as it usually is, but the honorable reward of labor honorably done; we say the commercial spirit, that vile, barbaric thing which is now covering with blood the fair face of Europe and setting every man at another's throat. This thing we saw at work in Friedmann, and long after his exit with his pockets lined with gold, we gaze upon its results, so eloquently damned in the simple words of Dr. Barnes, "it appears certain that the vaccine had no beneficial effect upon the patients." McCrae we shall always revere as a brave and chivalrous gentleman. On Friedmann let us finally lower the curtain of oblivion forever.

HELP THE FOOD ADMINISTRATION.

We physicians should consider ourselves unofficially officers of the United States Food Administration. As family advisers in matters of health we can explain to our patients the letter and spirit and intent of the restrictions now laid upon the public, and we can clear away many false notions which appear to have arisen in the minds particularly of those whose attention more than normally centers on the activities of their organs of digestion. We can assure the normal man that less meat, wheat, and sugar in his diet will be to his advantage; we can convince the fat man that meat fat, butter, oils and bread should for him be reduced to a minimum, and we can persuade the hypochondriac that the change from wheat bread to fifty per cent. barley, rice or potato bread has nothing to do with those eructations of "gas" or that "terrible distress" after eating. Furthermore, we can grant special dispensations to the real invalids whose future health may depend on the successful assimilation of food, and in whom the choosing of easily digestible, non-irritating articles of diet with a maximum nutritional value is the prime necessity. We are, or should be, expert dietitians, and we should make ourselves thoroughly familiar with the aims and activities of the Food Administration and energetically active in furthering its work.

THE RHODE ISLAND HOSPITAL UNIT TO MOBILIZE.

Navy Base Hospital No. 4, which was organized under the auspices of the Rhode Island Hospital about a year ago, has been notified that it will be mobilized in the near future. This announcement will serve to end a period of suspense which has lasted for many months, and which has been trying for the staff, the nurses and the enlisted personnel. The number of Navy Base Hospital units is small as compared with those of the Army, and at present there are but six organized. Several of these are now seeing active duty in important places. The Providence unit has been organized and its complete equipment in readiness for many months. Commander Carpenter, U. S. N., who has been stationed at the Naval Hospital, Newport, has been appointed the executive and commanding officer of the unit. Commander Carpenter will be remembered by those who attended the September meeting of the Rhode Island Medical Society, held at the Rhode Island Hospital, as the author of an interesting paper on the present medical activities in this Naval District.

CALL TO THE FRONT.

The war is disturbing and upsetting so many things in our lives which we thought were immutable, that medical journals cannot expect to escape the drag net. The business manager of the Rhode Island Medical Journal has responded to the call of duty and has recently departed for service at Fort Oglethorpe. Doctor Hawkins will be greatly missed in a position which he has filled with great ability. When the Providence Medical Journal was in a precarious

condition he took over its business management and worked with untiring energy until it was placed upon a sound financial basis. When this journal was replaced by the present state journal and became a monthly instead of a bi-monthly publication, the amount of work and detail which fell upon the business manager was enormous. The physicians of the state are greatly indebted to Doctor Hawkins for his able services cheerfully given in an unenviable position.

ILLEGAL OPERATORS.

A medico-legal item of interest occurred last month when a woman was convicted in the local court of illegal operation. The woman had enjoyed a lucrative clientele for some time, pursuing her nefarious work in a respectable residential section of Providence. Especial interest attaches to the case by reason of the fact that, so far as we know, this is the first case of a woman convicted in this State for the crime of performing abortion, and, furthermore, that the conviction did not depend upon the death of the unfortunate patient. The police, by their clever management of the affair by which the culprits were caught red-handed and without opportunity to prepare more than the flimsiest of alibis, and the Attorney General's office, by the promptitude and vigor with which the case was prosecuted, are to be heartily congratulated. It is a service rendered whose far-reaching possibilities in breaking up this iniquitous practice cannot be overestimated and decent public opinion cannot fail to approve of the outcome.

SOCIETIES

RHODE ISLAND MEDICAL SOCIETY.

Section in Medicine.

A meeting of the Section in Medicine of the Rhode Island Medical Society was held at the Medical Library, April 23, 1918, at 8:45 p. m.

Paper: "Pernicious Anemia." Dr. Charles A. McDonald.

Creighton W. Skelton, M. D.,
Secretary-Treasurer.

DISTRICT SOCIETIES

Providence Medical Association.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library on April 1, 1918. The meeting was called to order by the President, Dr. William F. Flanagan, at 8:55 p. m. In the absence of the Secretary, Dr. F. M. Adams was appointed Secretary pro tem. There were present at the meeting forty-five members. The records of the preceding meeting were read and approved.

The first paper of the evening, entitled "Eye Strain as Related to General Practice," was read by Dr. Frank J. McCabe.

The discussion was opened by Dr. W. C. McLoughlin, who discussed the relationship between headache, gastric disturbances and ocular strain, many such cases giving no history of symptoms referable to the eyes. The discussion was continued by Dr. Leech, who emphasized the relationship between body symptoms, headache and eye strain. He also discussed the intimate relationship of the eye and the nasal accessory sinuses. He also discussed the troubles occurring in the old or presbyopic stage, remarking the difficulty which the patients have in obtaining relief and the necessity of making careful fundus examinations. Dr. Hawkins cited a case of constipation cured by the use of properly fitted glasses.

The second paper, entitled "A Review of One Hundred Consecutive Cases of Acute Diseases of the Appendix, Gall Bladder, Duodenal and Gastric Ulcers Which Have Come to Operation," was read by Dr. Frederic V. Hussey.

The paper was discussed by Dr. John W. Keefe, who feels that analysis of surgical records should be studied for morbidity and mortality results. He cited his experience in appendicitis covering a period of years, showing the attitude in former years. The physician should advise early operation, firmly advising quick action. Cathartics in abdominal diseases are contra indicated. In gall bladder disease, operation should be deferred until acute symptoms subside.

Dr. O'Meara called attention to the resolution before the Senate for appropriations by the State to the Rhode Island and St. Joseph's Hospitals, urging upon the members the importance of using their influence to have these measures passed.

Dr. John M. Peters told of the efforts of the Rhode Island Hospital to get help from the towns outside of Providence.

Dr. Flanagan thanked Dr. O'Meara for his efforts in medical legislation and urged upon the members of the Association the importance of

influencing the members of the legislature. The meeting adjourned at 10:20 p. m. A collation was served.

FRANK M. ADAMS, *Secretary pro tem.*

KENT COUNTY MEDICAL SOCIETY.

Regular meeting of the Kent County Medical Society was held in the rooms of the Nurse Association at Riverpoint, March 21, 1918, at 4 p. m., Dr. Bryer in the chair. Minutes of the last meeting read and approved. Bills for printing, postage, etc., were approved and ordered paid. The Owen Bill, 3748, and the Dyer Bill, 9563, creating advance rank for officers of the Medical Corps, were read to the Society, approved, and a resolution to that effect ordered sent to senators and representatives from this State. Dr. Frank E. Peckham of Providence read a paper—illustrated by X-ray pictures and films—on "Fractures in General," and showed splints and appliances tried by him and found practical. Vote of thanks extended to Dr. Peckham. Voted to adjourn.

JAMES M. BODWELL, *Secretary.*

NEWPORT DISTRICT SOCIETY.

At the deferred annual meeting of the Newport Medical Society, held March 21, 1918, the following officers were elected for the ensuing year: President—Dr. Edward V. Murphy; First Vice President, Dr. Abram F. Squire; Second Vice President—Dr. Charles W. Stewart; Secretary—Dr. A. Chace Sanford; Treasurer, Dr. D. P. A. Jacoby; Delegates to the House of Delegates of the Rhode Island Medical Society—Drs. Norman MacLeod and Marcus F. Wheatland; Censors—Drs. S. C. Powell, William S. Sherman and Henry V. Carroll. The matter of electing a Councillor was left until the next meeting.

A. CHACE SANFORD, *Secretary.*

PAWTUCKET MEDICAL ASSOCIATION.

The twenty-third annual meeting of the Pawtucket Medical Association was held March 21, 1918, at the To Kalon Club, Pawtucket. The following officers were elected: President—Dr. A. H. Merdinyan; Vice President—Dr. E. J. Mathewson; Secretary—Dr. C. E. Thibodeau; Treasurer—Dr. S. A. Hughes; Member of the Standing Committee for five years—Dr. C. H. Holt; Delegates to the House of Delegates of the Rhode Island Medical Society—Drs. H. A. Manchester and E. S. Kiley.

The business meeting and election was followed by a dinner, after which the members listened to an address by Commander D. N. Carpenter, U. S. N., who spoke on the work of the Medical Corps in the Navy.

The regular monthly meeting of the Pawtucket Medical Association was held in the out-patient building of the Memorial Hospital, April 18, 1918, at 8:45 p. m. Dr. Charles O. Cooke of Providence read a paper entitled "Acute Diseases of the Abdomen."

CONRAD E. THIBODEAU, *Secretary.*

WOONSOCKET DISTRICT SOCIETY.

The regular meeting of the Woonsocket District Medical Society was held March 21, 1918, at 8:30 o'clock, at the office of Dr. E. D. Clarke. A general discussion took place concerning the society, and medical matters in general. Much interest was manifested by the members, and there was a good attendance. The next meeting will be held with Dr. J. J. Baxter, April 18, 1918.

E. F. HAMLIN, *Secretary.*

HOSPITALS

RHODE ISLAND HOSPITAL.

Dr. L. S. Gilpatrick has gone to the Providence Lying-In Hospital to remain on duty until the mobilization of the Navy Base Hospital No. 4, to which he is attached.

Dr. H. J. Gallagher is on duty at the Providence Lying-In Hospital while awaiting orders.

Dr. T. C. Wyman has been commissioned 1st Lieutenant, M. R. C., and has been ordered to the Army Medical School at Washington.

The regular quarterly meeting of the Rhode Island Hospital Staff Association was held in the chapel at the hospital, April 8, 1918, at 12 m.

PROVIDENCE CITY HOSPITAL.

Dr. Frederick Thorne began his service as interne on March 15, 1918.

Dr. Morrissey began his service on March 1, 1918.

Dr. Parker Mills has been appointed Second Assistant Superintendent and began his duties April 1, 1918.

LETTER TO THE EDITOR.

Medical Reserve Corps.

To the Editor:

1. I wish to call to the attention of the profession at large the urgent need of additional medical officers. As the war progresses the need for additional officers becomes each day more and more apparent. Although the medical profession of the country has responded as has no other profession, future response must be greater and greater. The Department has almost reached the limit of medical officers available for assignment.

2. I am, therefore, appealing to you to bring to the attention of the profession at large the necessity for additional volunteers. So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active, or the fighting phase, a phase which will make enormous demands upon the resources of the country. The conservation of these resources, especially that of man-power, depends entirely upon an adequate medical service. The morning papers publish a statement that by the end of the year a million and a half of men will be in France. Fifteen thousand medical officers will be required for that army alone. There are today on active duty 15,174 officers of the Medical Reserve Corps.

3. Within the next two or three months the second draft will be made, to be followed by other drafts, each of which will require its proportionate number of medical officers. There are at this time on the available list of the Reserve Corps, an insufficient number of officers to meet the demands of this draft.

4. I cannot emphasize too strongly the supreme demand for medical officers. Will you give the Department your assistance in obtaining these officers? It is not now a question of a few hundred medical men volunteering for service, but it is a question of the mobilization of the profession that in the large centers of population and at other convenient points as well as at all Army camps and cantonments, boards of officers have been convened for the purpose of examining candidates for commission in the Medical Reserve Corps of the Army. An applicant for the Reserve should apply to the board nearest his home.

5. The requirements for commission in the Medical Reserve Corps are that the applicant be a male citizen of the United States, a graduate of a reputable school of medicine, authorized to confer the degree of M. D., between the ages of 22 and 55 years of age, and professionally, morally and physically qualified for service.

6. With deep appreciation of any service you may be able to render the Department, I am

W. C. Gorgas,
Surgeon General, U. S. Army.

MISCELLANEOUS

Dr. Peter L. Keough of Pawtucket, Captain in the M. R. C., U. S. A., and stationed at Camp Sherman, Ohio, died April 15, 1918, after a short illness of pneumonia.

Capt. Joseph F. Hawkins of Providence and Capt. Fenwick G. Taggart of East Greenwich, M. R. C., U. S. A., left April 8 for duty at Fort Oglethorpe, Georgia.

ARSPHENAMINE AND NEOARSPHENAMINE.

In view of the reports in current medical literature of untoward results from the use of arsphenamine and neoarsphenamine, the United States Public Health Service requests that samples of any lots of these arsenicals which have shown undue toxicity should be forwarded to the Hygienic Laboratory for examination.

In sending these samples it should be ascertained that the lot number is the same as that of the ampoules used on patients. The samples sent should, if possible, be accompanied by a brief note stating the approximate body weight and age of the patient, the dose and dilution of the drug given, the symptoms and result; that is, whether fatal or not.

AMERICAN MEDICAL ASSOCIATION.

Hotel Headquarters for the Chicago Session.

The following hotels have been tentatively designated as general and section headquarters for the Chicago Session, June 10 to 14:

General Headquarters: Hotel Sherman, North Clark and West Randolph.

Practice of Medicine: Hotel Morrison, 83 West Madison.

Surgery, General and Abdominal: Auditorium Hotel, 430 South Michigan.

Obstetrics, Gynecology and Abdominal Surgery: Congress Hotel, South Michigan and Congress.

Ophthalmology: Hotel LaSalle, LaSalle and West Madison.

Laryngology, Otology and Rhinology: Hotel LaSalle, LaSalle and West Madison.

Diseases of Children: Congress Hotel, South Michigan and Congress.

Pharmacology and Therapeutics: Auditorium Hotel, 430 South Michigan.

Pathology and Physiology: Auditorium Hotel, 430 South Michigan.

Stomatology: Congress Hotel, South Michigan and Congress.

Nervous and Mental Diseases: Blackstone Hotel, South Michigan and East Seventh.

Dermatology: Blackstone Hotel, South Michigan and East Seventh.

Preventive Medicine and Public Health: Auditorium Hotel, 430 South Michigan.

Genito-Urinary Diseases: Auditorium Hotel, 430 South Michigan.

Orthopedic Surgery: Congress Hotel, South Michigan and Congress.

Gastro-Enterology and Proctology: Auditorium Hotel, 430 South Michigan.

Scientific Exhibit, Registration Bureau, Commercial Exhibit, Information Bureau, and Branch Postoffice: Hotel Sherman, North Clark and West Randolph.

BOOK REVIEWS

Technic of the Carrel Method. By J. Dumas and Anne Carrel. pp. 90. Paul B. Hoeber, New York. $1.25.

This little brochure is an authorized translation by Dr. Adrian V. S. Lambert of the French original, and the translation is an excellent one. This book in no way supplants the more complete account by Carrel and Dehelly on "The Treatment of Infected Wounds." It was written primarily for the information of nurses so that they might have a clear, short account of the various details of the technic and an accurate description of the apparatus used in carrying it out. In terse, crisp language accurate and definite directions are given as to the various steps in this method of treating infected wounds. The materials used in the dressing, microscopical examination of the wound secretions, the nature of the dressing and of the irrigating apparatus, the technic of irrigation and of the preparation of Dakin's solution are carefully and briefly described in separate chapters. To one who has witnessed the demonstration of the Carrel method in the special war hospital at the Rockefeller Institute, it is apparent that the book is well written for the purpose in mind. It will be of great value to those who would familiarize themselves with the technic of the method. The theoretical discussion of wound infection, case reports and surgical problems relating to infection find no place, of course, in such a work as this. R. H.

Impotence and Sterility, with Aberration of the Sexual Function and Sex Gland Implantation. By G. Frank Lydston, M. D., D. C. L. The Riverton Press, Chicago, Ill. Price $4.00.

The first chapter emphasizes the bearing that aberration and imperfection of sex have on sexual relations, dealing with hermaphroditism, hypospadias, epispadias and various kinds of acquired defects, both physical and psychical. The book continues with a broad view regarding monogamy and polygamy, the human excesses in an indulgence which nature meant for the propagation of the species only, and a very sharp criticism, which I think is justly warranted, of the profession for its passiveness toward the proper dissemination of sexual knowledge and laxity for prophylaxis for venereal diseases and its vital importance to our social status.

The chapters on impotence and sterility are ably written, the psychical, drug and electrical treatment extremely rational.

The author strongly reiterates his views that sexual perversion and inversion are purely biochemic in origin, that perversion of the quality and lessening of the quantity of sex hormone formed in the glands that produced the parental germ cell or sperm cell, or both, is the biologic foundation of both psychic and physical aberrations of sex differentiation. If this view is correct and cases are taken early, prior to adult age, these are susceptible to cure by implantation of sex glands, thereby adding to the economy during the period of sex development a certain quantity of new and better quality of sex hormone. The last three chapters are devoted to sex gland implantation and the author substantiates his belief in its value and effects by numerous experiments of implantation of testes and ovaries in living subjects.

The book is most ably written and brings before us new possibilities. J. E. K.

THE RHODE ISLAND MEDICAL JOURNAL

The Official Organ of the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

VOLUME II
NUMBER 6
Whole No. 120

PROVIDENCE, R. I., JUNE, 1918

PER YEAR $2.00
SINGLE COPY, 25 CENTS

ORIGINAL ARTICLES

SOME CARDIO-VASCULAR CONSIDERATIONS IN CONNECTION WITH ADVISORY DRAFT BOARD EXAMINATIONS.*

By George S. Mathews, M. D.

The medical man examining registrants for military service is eager to recommend for acceptance all who are fit and is equally anxious to exclude those who are unfit. A large majority of cases can be classified readily as worthy or as unworthy of acceptance. Not a few, however, tax the mental acumen of the examiner. No one is more severely distraught than the one whose duty it is to pass judgment on the heart and lungs. It is true that instructions more or less elaborate and minute have been issued in the form of a "Manual of Instructions" for Draft Boards and for Medical Advisory Boards, prepared under the direction of the Surgeon General of the army. These instructions are, of course, scientifically up to date, and are a compend of the recent knowledge of the subject. Nowhere in so small a compass can as much information be obtained on the subjects under discussion. But with all the specificity as to detail there is a great opportunity for the examiner to get stranded on the rocks of doubt or to eddy in the currents of uncertainty. Fairness to the registrant, justice to the Government rings many a qualm of conscience from the experienced. After all, the best judgment of the examiner is given and is based on a careful survey of the facts presented and their interpretation. The recognition of signs and symptoms, their correlation and their proper interpretation, all combined, go to make up an opinion worth while. The failure to recognize the facts, the failure to correlate them, will, of course, result in a wrong interpretation. It is true that much of the work is done with rapidity, and in order that there be no lost motion a well thought out system or routine will greatly expedite the elimination of waste and the economy of action. A wide-awake chairman or secretary can arrange the cases for the respective examiners in a way that will make much for celerity. In the board with which the writer is associated the chairman, Dr. George L. Collins, has arranged the examinations in such a way as to cause the least overlapping and reduplication of labor. In regard to the registrants who are drawn from all vocations and walks of life—from grimy labor to the university teacher—almost without exception were they bodily clean and neatly clad. The exception, too, was the slacker or the shirker.

The Advisory Board of the northern section of Rhode Island has the great advantage of having commodious quarters in the Out Patient Department building of the Rhode Island Hospital. Here are ample rooms and the quiet so essential for chest examinations. The cramped quarters with the noise, confusion and distractions incident to the simultaneous examination of a number of applicants by different examiners must hamper the careful auscultation of the chest. Even under ideal conditions of quiet the tension of nerves is great in the rapid though systematic and careful examination of chest where eyes, ears, fingers and brain are in active requisition. Even under the most favorable circumstances Homer may nod.

In the course of a routine examination of the chest a definite plan and orderly scheme was followed. Inspection, palpation, percussion and auscultation in the order named were attempted. In the necessary hurry no doubt much of interest passed unnoticed. Many errors of judgment will be corrected in later work in the camps. However, much of interest was recognized.

In a few of the cases where there was a long chest the apex was located in the sixth space. In two of the cases the apex appeared in the fifth space when the recumbent position was assumed. An X ray report confirmed the diag-

*Read before the Providence Medical Association, May 6, 1918

nosis of a ptotic heart. In none of the cases was there evidence of left ventricular hypertrophy. Apropos of the long and rather flat chest the timely article in a recent medical journal by Sir William Osler on "War Wastages" is pertinent. In his triad of "war wastages" the thin, flat chested man is a prominent offender. This man bears the rigorous life of the soldier badly.

In some of the registrants it was impossible to see or feel the apex beat even with the assumption of the left lateral position. In most of the cases this will swing out the ventricle up against the chest wall so that the apex beat can be plainly seen and felt.

An inspection of the neck, supra sternal notch, and chest for undue pulsations and palpation for thrills yielded, frequently, fruitful results. The impression was received, though it was not statistically proven, that the apex was very many times nearer the vertical nipple line than one is taught to expect. The area of cardiac dullness, too, in many cases was rather increased on the left of the sternum—and this in cases where there was no accentuation of either of the basal second sounds or a widened area of dullness to the right of the sternum. Perhaps in a few of these scientific instrumentation would have shown a right ventricular hypertrophy too slight for clinical observation, but in the form of a downward R wave.

According to the "Manual of Instructions," all cases of cardiac murmur shall be referred by the Draft Board to the Advisory Board. This class of case constituted the largest percentage of reference cases where the heart was in question. The instructions are explicit and mandatory to reject all cases with a diastolic or a presystolic murmur. On the other hand, with equal emphasis one is informed "it cannot be too strongly insisted on that, given a heart of normal size and responding normally to effort, any murmur that is heard should be considered accidental and insignificant, unless it can be positively demonstrated that it is a mitral or aortic diastolic murmur. It should also be constantly borne in mind that the excitement of the examination may produce violent and rapid heart action, often associated with a transient systolic murmur, which effects may erroneously be attributed to the effects of exertion." It is in this class of case that at times great care must be exercised. While in most cases where there is evident right ventricle hypertrophy with P_2+ and subjective evidence of failure of cardiac response, it is easy to decide to reject, or where the exercise test is good one may recommend a classified service. There are, however, very many cases where murmurs, systolic in time, exist—and these cases far outnumber the truly organic or valve cases—where in most of them military service is intended. In many borderland cases where after several examinations doubt exists, it would seem advisable to pass them up for observation in the real training of camp, during which training they can be followed with care, and if they fail of the mark they can be excluded. In many of the registrants a systolic murmur over the left precordium disappeared upon the exercise test. In such no doubt the tonicity of the heart was improved by the exercise and the ordinarily flabby musculature needed but the stimulation of exercise to bring the ventricles to a more positive contraction. Lack of tonicity is a frequent cause of precordial systolic murmurs. On the other hand, some of the men presented a murmur on the first excitement of the examination—a murmur that soon disappeared. Not infrequently one finds a systolic murmur at the apex after exercise with radiation to the axilla, but with a normal response to the exercise test, i. e. with no abnormal increase in pulse rate, with normal location of apex, and proper A^2 and P^2.

Cardio-respiratory murmurs were very common in the cases that came under the writer's observation—murmurs that increased in intensity with full inspiration and diminished with expiration, sort of crescendo diminuendo murmurs.

The systolic murmur at the right base is one to which it is necessary to give some heed. There were only a few cases where this was the sole location of the murmur. In one there was a scarcely audible second aortic sound. In another a similarly faint aortic second was heard with a questionable diastolic whiff on deflation of the lungs. A Wasserman in the last case was negative. The rough aortic systolic sound so common in the arterio-sclerotic aorta is not to be expected in the young men examined unless, perchance, a precocious arteriosclerosis exists. Dr. Lewis pays little heed to the aortic systolic sound unless the A_2 is gone.

There is another heart condition aside from murmurs where considerable difficulty may arise in deciding the admissibility of a registrant to military service. Reference is now to the

arrhythmias. Of these probably ninety per cent. fall under three headings: The sinus arrhythmia or respiratory type; the extra systoles or ectopic type; and auricular fibrillation. The type more frequently presenting itself to the draft examiner is the respiratory type. This is easily recognized as a rule by the "wave-like alternations of rapid and slow heart action." It is rapid in inspiration and slows down with expiration. It depends on the action of the vagus and is a more or less physiological phenomenon. It is this irregularity that has relegated many young men in their teens to shun exercise at the advice of their physicians and it has unfortunately made early neurasthenic invalids of many healthy young people.

Extra systole or ectopic beat is a very common type of arrhythmia. Generally easy to recognize by ordinary clinical means, it is largely of laboratory interest whether the beat originates in the auricle, in the ventricle or in the junctional portion. Generally, too, it is not of pathological importance. This statement can safely be made that what is an apparently normal heart in regard to location of its apex, valve sounds and response to the exercise test need not disturb the examiner if extra systoles occur. In nervous strain, under excitement, and even under quite normal conditions this condition may exist in some persons. It is also, on the other hand, found in various pathological conditions, as in myocarditis, hypertension, in the recovery from infectious diseases. Extra systoles were found in not a few of the hearts examined. Far be it from the statement that every case of extra systole can be readily differentiated by ordinary clinical means. In a rapid acting heart and when the extra systole comes in frequently and at irregular intervals, it may be difficult to determine whether fibrillation is not present.

Auricular fibrillation was seen in several cases. In one case during the examination fibrillation developed and continued. Pulsus irregularis perpetuus was the name at one time applied to this abnormality, but this designation does not conform entirely to the actual facts in all cases. For in some the irregularity disappears and again returns. Auricular fibrillation disqualifies a registrant. The diagnosis as a rule is easy.

What was apparently a paroxyomal tacchycardia occurred in one man while under examination. During auscultation he complained of some precordial discomfort, palpitation, dizziness, and the heart beat instantly increased from about 90 to 180. The action was perfectly regular. This rapid rate continued for some three or four minutes and then resumed its first and slower rate instantaneously. Of interest in this case would have been a polygram or an electrocardiogram, for it is not impossible that the auricles might have been beating several times more rapidly than the apex or pulse beats. This may have been a case of auricular flutter.

It is a matter of more than academic interest to take the pulses of all registrants in the three stages: rest; after exercise; and after two minutes at rest after the exercise test, and to record them. To draw conclusions or to make serious deductions from the cases sent up to the Advisory Board would be unfair, inasmuch as these cases were sent up for further heart consideration. My impression is that a very large number, a majority, of these cases had a pulse rate of 80 or over. Just what a tabulation of the pulse rate of men in the draft net would show would be of some interest. The pulse varies much in any one individual. Time of day, the individual condition, excitement, nervousness, all make a difference. Cavorting with John Barleycorn in some of my men may have been a contributing factor. It is stated that some of the slackers have resorted to atropine or belladonna.

The work in England in connection with the heart in reclamation camps is of immense importance. Such eminent cardiologists as Thomas Lewis, Sir James Mackenzie, Sir Clifford Albutt are members of a commission looking to the cardiac betterment of the soldiers. Many fine articles have been appearing in the English journals in regard to the studies of this commission and the methods approved. In 1871 Dr. DaCosta published an article, epoch making, in the *American Journal of Medical Sciences* on the "Irritable Heart of the Soldier." It is a classic. For keen observation and judicial interpretation it is well worth reading. No doubt it is somewhat of a far cry from the registrant to the invalided-home soldier, but many of these cases might be anticipated. The exercise test that the man goes through with is one of the most significant requirements. One can extract from it much of great value in the placing of the man and in the elimination of the unfit. If after 100 hops on one foot there is precordial pain, palpitation, breathlessness, dizziness, exhaustion, much heed is to be taken. Dr. Lewis in a recent article concerning his work at the

Military Heart Hospital, Colchester, England, says that "it is essential that objective evidence of symptoms should in each case be found before a complaint is allowed to weigh. Most patients emphasize a single symptom and emphasize it constantly; a changing symptomatology can rarely be corroborated by outward signs, and is to be distrusted. . . . . The tolerance of exercise is to be judged by physical signs and not by symptoms; symptoms are chiefly of value in directing the attention to physical signs." Breathlessness with the attendant facial expression of distress is a marked symptom of cardiac weakness after exercise. Pain over the precordial region is often found, and it will be well to examine the registrant's chest in cases of these complaints to elicit evidence of hypersensitiveness over the heart, over the pectoral folds. None of the physical signs or symptoms or all need necessarily exclude a registrant from full military service or, at any rate, from a classified service. Some will be eliminated forthwith. Many cases can be passed up to camp life and training where the proved out unfit can be eliminated after a careful tryout.

In the invalided home soldiers in England many marked cases of irritable heart have been returned to active military work after due patient training in graduated camp work. Many are reclaimed for special service. All of them otherwise would have landed high and dry as physical derelicts. Careful scrutiny in the early examination of recruits is needed, watching for the symptoms already mentioned: breathlessness, exhaustion, precordial pain, et al. Not all exhaustion may be due primarily to the heart. In many of the limp, lackadaisical it may be due to acidosis—to retained Co_2 or to retained Co_2 and what physiological chemists call bunker salts. Also faintness may be due to vaso motor depression as, for example, when on standing in a warm room there may be anemia of the brain due to vaso dilation of the vessels of the lower extremities or of those of the abdominal organs.

The systolic blood pressure in many of the men was rather high. Before exercise and in a recumbent position in a rather large number a systolic pressure of 160 or higher was obtained with a varying and as a rule not abnormal diastolic reading, and in cases where there was no evidence of left ventricular hypertrophy or a sharp A_2. In some of these under similar conditions a week or two later there was a more normal reading. In some, however, the high pressure persisted and without discovered cause. Where a high pressure was found the urine was examined. It would be a matter of practical importance where cardiac weakness is suggested to take the pressure first in the recumbent position; next, after the exercise test when one should get an increase in the blood pressure; and finally some minutes after the exercise test when the blood pressure should return to that of the first reading. Of course all this is time consuming, but telling information no doubt could be obtained.

The statistics that are accumulating in regard to registrant examinations will be illuminating. In an analysis of some 9,000 cases one writer noted that 29 per cent. were rejected on physical grounds. Eyes, teeth, weight, in the order named, were the largest contributing causes. The heart was responsible for about 2½ per cent. of rejections. It is stated by competent observers that in a population of military age between 19 and 45 about 50 per cent. would be found disqualified. This is startling and, if true, calls for radical reform in the hygienic education of the people in the overcoming of much preventable physical deficiency. In the words of Kipling:

"It ain't the individual,
Nor the army as a whole,
But the everlastin' team work
Of every bloomin' soul."

EPIDEMIC MENINGITIS.*

By Carl D. Sawyer, M. D.,
Providence, R. I.

Epidemic meningitis has been quite prevalent in the army camps of Europe during the period of the war and has been the cause of many deaths. With the establishment of cantonments in this country it has been quite prevalent here. Some very interesting work has been done on the diagnosis and treatment of the disease and as a result quite a few new observations of importance have been made.

The meningococcus is unknown in nature aside from the human host. Its presence in a community is not due so much to active cases as it is to chronic carriers of the disease. Since these carriers are apt to be unsuspected, it fol-

*Read before the Medical Research Club, March 8, 1918

lows that they are the agencies by which the infection is propagated. This situation is bad enough in ordinary times, but in war time, with the association of men in camps, it becomes serious. These young soldiers are at the susceptible age and by the necessary close contact with others among whom are carriers the inevitable result is that many contract the disease.

Mode of Infection: All agree that the primary seat of infection is the nasopharynx. The meningococci also leave the body by way of the secretions of the nasopharynx. When the meningococci are once implanted on the mucous membrane of the nasopharynx they probably multiply there. There is some difference of opinion as to how they reach the meninges. Dr. Flexner says the organisms may pass directly to the nervous system by way of the lymphatics alongside the olfactory nerves or by way of the blood. He believes, however, it is usually by the lymphatics.

Major Herrick of the United States Army believes the disease is not primarily a meningitis, but that it is a generalized systemic infection—a sepsis—with possible secondary involvement of meninges, joints, pericardium, endocardium, testicles, conjunctivae, sclera, pleura, lungs, from all of which regions, in addition to the tonsils and pharynx, the meningococci have been isolated. In many of his cases the systemic symptoms appeared one to three days before the involvement of the meninges. In 75 per cent. of his cases a petechial rash appeared very early and was the first valuable sign.

Major Medlar, United States Army, also believes that the epidemic type of meningitis, like all cases of meningitis except the traumatic types and those due to abscesses, is hematogenous.

Thomsen and Wulff of Copenhagen in December, 1917, succeeded in getting a number of positive blood cultures early in the disease. They also cultivated them from the petechiae. In their series of 42 cases all had sore throats. Their conclusions were that the majority of cases must be regarded as metastatic complications of a primary infection of the blood. They also believe that the meningococci vary in virulence at different periods and that the virulence is increased by repeated passage through one nasopharynx after another. Their observations seem to indicate that the meningococci have greater virulence during the seasons when people are housed most and are most subject to colds. At other seasons the organisms live as saprophytes, and if the hosts develop a catarrhal condition they spread the organisms in speaking, coughing and sneezing, and their virulence is increased by being planted on another nasopharynx. This seems to explain why there may be long absences of the disease, followed, perhaps, by epidemics; also why carriers rarely develop meningitis and why chronic carriers seldom give rise directly to meningitis cases.

Carriers and Methods of Detection: Two classes of persons may have the meningococcus; first, persons suffering from epidemic meningitis; second, healthy carriers. The first is of less danger than the second because he is confined to his bed. The healthy carriers, being unsuspected, move about and are therefore a menace, and when introduced into a group of susceptible ages a certain number become contaminated. A variable number of these become infected and develop meningitis, but a larger number become temporary carriers or more enduring or chronic carriers. The number of carriers produced exceeds the number of cases of infection. These carriers are classed as "contact" and "non-contact" carriers, being distinguished according as they have arisen from a known previous carrier or from a case of meningitis or without such known association.

From figures obtainable it appears that about 2 per cent. of a general community are carriers. But among contacts 5 per cent. to 10 per cent. are carriers.

The duration of this carrier stage naturally varies. Flack has found that about 2 per cent. of cases become clear in a two-week period, 52 per cent. in a four-week period and 5 per cent. in a twelve-week period. Duration has lasted twelve to fifteen months, with eventual disappearance of the organisms. Sunshine and clear weather tend to cause them to clear earlier, while tonsillitis and catarrhal inflammations tend to prolong the carrier stage.

For the detection of these carriers a special technic has been devised. A West tube is the instrument which may be used to obtain the secretions from the nasopharynx. The secretions are planted on serum agar plates. Colonies from these plates are transferred to sheep serum agar slants and incubated for another sixteen to twenty hours. These cultures are subjected to microscopic examination, agglutination tests and

fermentative effects on sugars. The agglutination test is the final test.

Types of Meningococci: The meningococcus is not a consistent species, but consists of several closely related varieties. Culturally these several members are identical, but differ immunologically.

Dopter in 1909 was the first to discover that the prevailing type (called normal or regular) differed from a second type, called by him para. An immune serum prepared with normal cultures contains agglutinin and other antibodies for its own type and little for the other type. Since that time English bacteriologists have classified the meningococci into four types, I, II, III and IV. Type I corresponds to the para and type II to the normal or the regular meningococcus. Types III and IV conform to the more common intermediates. There seems to be, therefore, from immunologic studies two fixed types and certain less fixed ones, any one of which may cause epidemic meningitis.

To successfully fight the disease a polyvalent antimeningococcic serum must be used. This serum must contain antibodies of the fixed types and for as many of the intermediates as may be available.

It has also been shown that the types of meningocci which occur in the cerebro-spinal fluid correspond with those found in the nasopharynx. It has been shown, too, that a carrier which gives rise to other carriers results in that identical type of meningococcus in all, and that the occupation of the mucous membrane by one type renders the contamination by a second type very infrequent.

Treatment of Carriers: Since carriers are now recognized as the sole source of infection, they are the ones who require special measures to prevent the spread of the disease. Isolation naturally is necessary. Attempts have been made to immunize them by means of vaccines, but absolutely without success. Several antiseptic chemicals have been applied to the nasopharynx by swabbing, douching, spraying and vaporization. Dunham and Dakin have devised a solution of dichloramin-T in oil to be applied by means of a hand spray which seem to be about the most efficient.

In this review of the literature a number of interesting things were noted, especially some diagnostic points, which seem worth mentioning. The first is the petechial exanthem which Herrick found very early. To be sure, this has been noted before, hence the old name, spotted fever, but as has been stated heretofore, Herrick found this rash in about 75 per cent. of his cases as the earliest sign. It appeared first on the deltoid regions, hips, trunk, extremities, mucous membranes and face. The purpura of his fulminating cases did not appear to originate in these petechiae, but were apparently a separate lesion. A minority of the cases, however, showed little or no rash.

Another thing of interest is the fact that the meningococcus can usually be recovered from the spinal fluid at the first or second lumbar puncture, even six to thirty-six hours before the characteristic clinical picture develops, or even before the spinal fluid becomes cloudy or shows an increase in cells.

At this stage the fluid may be perfectly clear, have a normal cell count and may or may not show globulin, yet when centrifugalized and strained a very few meningococci may be found. In doubtful cases it seems advisable to repeat the spinal puncture at intervals of three to six hours in order to drain the meningococci from the brain down into the spinal canal. By so doing a second puncture may show pus and organisms. It has been suggested that this observation indicates that the meningeal infection begins within the skull and the spinal meninges become infected later by extension.

Another point of interest is the fact that blood cultures made early show surprisingly often the presence of meningococci in the blood. These organisms are by no means easy to grow and require special media, hence negative results must be expected in a certain number of cases.

Treatment: The treatment of ordinary cases may be passed over because the method is unchanged. But there is one form of treatment which, in some cases, has given excellent results and should be mentioned. It is the intravenous use of serum. Herrick has found that in the stage of sepsis before meningitis has developed the routine administration of serum intravenously is very efficacious. It is given in doses of 20 to 60 c.c. every 24 hours for two to three days. He believes it should be given before intraspinal treatment in such cases; in fact, that it is best to postpone intraspinal treatment until the fluid becomes cloudy.

CLINICAL DEPARTMENT

A CASE OF SIMULTANEOUS FRACTURE OF SIX LONG BONES.*

By Roland Hammond, M. D.,
Providence, R. I.

J. H., age 12, while running across a street, January 20, 1917, was struck by an automobile truck and knocked down. She was brought to the Memorial Hospital, Pawtucket, where it was found that she had sustained simple fractures of the middle of the humerus, radius, ulna, femur, and at the junction of the middle and lower thirds of the tibia and fibula. All these fractures were on the left side of the body. There were also multiple contusions of various parts of the body, and a general condition of shock.

Fig. 1. Showing fibrous union between radius and ulna at point of fracture.

On January 25 a plaster spica was applied to the leg under ether, and on January 27 a similar spica was applied to the arm under ether. X-ray examination of both arm and leg bones showed that the positions of various fractures were not entirely satisfactory, and Dr. Frederick V. Hussey very kindly asked me to assume charge of the case.

On February 3 an adhesive plaster extension was applied to the leg and fifteen pounds weight added. A counter extension from the groin to the head of the bed was also applied and ten pounds weight added. In a similar manner an extension was applied to the arm, which was abducted until it was nearly at a right angle to the body. A counter extension was applied from the axila to the head of the bed. Coaptation splints were placed to control the fragments of the femur and humerus, and a posterior wire splint was applied to the leg in an attempt to control the fragments of the tibia and fibula, and to keep the foot at a right angle to the leg. The foot of the bed was elevated. Four days later six pounds more weight were added to the leg extension. These various measures served to control the position of the fragments and to bring the limbs down to length, except in the case of

Fig. 2. Condition after operation in which fibrous union was severed and forearm held in supination during recovery.

*Read before The Providence Medical Association, January 7, 1918

the leg. Here the fragments of the tibia and fibula could not be controlled and the lower leg and foot were gradually forced backward, producing a forward bowing at the site of fracture.

On February 15, the patient was etherized on a Hawley table, the leg pulled down to length, and the deformity of the tibia and fibula corrected. A plaster cast was applied from the toes to above the knee, with the foot at a right angle to the leg. Windows were cut over both malleoli through which the extension straps on the leg were passed. Extension and counter extension on both arm and leg were continued in bed until March 2, when all apparatus was omitted.

It was found that all the bones had united firmly and without deformity, except in the case of the forearm. The position of these bones had been satisfactory from the first, and less attention had been paid to them than to the other fractures. Consequently the forearm had assumed the position of pronation and union in that position between the radius and ulna had resulted. In an attempt to correct this deformity nitrous oxide was given on March 5, and the arm put in plaster of Paris from the fingers to the axilla with the elbow at a right angle and as much supination obtained as possible.

She began to walk with crutches and baking and massage of the arm was begun. She was discharged from the hospital April 27, 1917.

After four or five months of baking and massage with manipulations of the forearm, it was found that no improvement in the power of supination was obtained. Consequently on August 22, 1917, an anterior longitudinal incision was made over the site of fracture at the middle and upper thirds of the forearm. Fibrous union between the radius and ulna was found. This was severed, the bones were separated, and a plaster cast applied from the fingers to the axilla with the elbow at a right angle and the forearm in complete supination. The patient was discharged from the hospital September 8 in plaster.

She now presents 3-4 inch shortening of the left leg which is compensated for in the pelvis, since no curvature of the spine is present. The gait shows no evidence of a limp. Supination is practically as complete as in the normal forearm, and there remains only a slight bowing of the forearm which will disappear with further growth. Except for these slight imperfections the result otherwise is satisfactory in every way.

REPORT OF THE FIRST CASE OF PELLAGRA IN 1918.*

By Henry A. Jones, M. D.,
Howard, R. I.

Among the diseases caused by defective nutrition are scurvy from preserved food, beriberi from polished rice, and peripheral neuritis from canned or salt meat. Yet another disease may possibly have to be placed in this catagory. It is an old belief that pellagra with its train of cutaneous and nervous diseases is associated with a corn diet. This is debated. It is a curious coincidence that in the United States with its perfect milling systems the vitamines are removed from the flour to a greater extent than in Italy, and whereas the milder chronic type of the disease is common in Italy, the acute form is frequent in the United States. The diet should contain fresh vegetables, milk, meat to afford sufficient vitamines.

Axel Horst of Christiania found that fowls and pigeons showed progressive paralysis similar to the ship beriberi among the sailors of Norway.

Braddon in the Malay peninsula stated that beriberi was due to an exclusive rice diet and attacks those who fed upon the diet of polished rice.

Fraser and Stanton, acting on this suggestion, tried this on prisoners and could arrest the disease by feeding them the bran made from the hulls of the rice. Even the alcoholic extract from this bran cured the disease. They found that this something was neither a proteid, fat nor carbohydrate, and they found that there was another necessary element to preserve life. It is not even an enzyme, but is effective when present in the most minute quantities.

This new food factor has been named vitamine by Funk. With it and the addition of C_{24} H_9 O_9 N_5 he has arrested the paralysis found in pigeons fed on an exclusive diet.

M. L., widow, 52 years old, the mother of three children. Has been moral and temperate in every respect. Mill worker for eleven years and kept her own home. Left mill work because her feet began to swell and became tense and shining. No regularity about this swelling. No other definite symptoms at that time. After leaving mill went to work as a charwoman by the day. Always indoors.

*Read before The Providence Medical Association, May 6, 1918

Diet. Morning and evening meals at home. This would consist of a general diet with the exception of an excess of cornmeal in the form of Johnnycakes every morning and very often during the day, and also was very fond of cornmeal pudding. Her method of using milk was always to use condensed milk, never fresh milk.

For two years she has been rooming alone, boarding herself, getting her meals rather scantily, and on account of the increasing price of all commodities she used more and more of cornmeal because, as she tersely puts it, "It is all I could afford to buy." So far for the diet and general mode of living.

Medical History. (1) The history of swollen limbs causing her to seek a different occupation.

Previous History. (2) Went to Rhode Island Hospital in ambulance from own room three years ago for a shock. Blood test showed chronic malaria. Treatment consisted of bakes of the left leg for three weeks. Menopause three years ago, when she had severe hemorrhages. This kept up about one year. Stopped work on account of weakness. Consulted a physician, who informed her she was "run down and needed rest." She gave as symptoms: (a) Loss of appetite. (b) Lack of sleep. (c) Nervousness. (d) Loss of flesh. Never had a headache. No bowel trouble. Visited a physician twice. After this until her admittance to the State Infirmary she sat around the house.

Previous diagnosis made on account of mental condition: Climatic insanity.

Symptoms prominent since admission: (1) Mental apathy with fixed or stationary depression, loss of memory with approaching dementia. (2) Physical lethargy. Listless and weak. (3) Gastric disturbance. Vomiting and loss of appetite, weak and rapid pulse. (4) Cutaneous eruptions on back of hands about April 1 and later manifestation about chin and nose.

Diagnosis: Pellagra. Cause: Improper dieting. Treatment: Tonics, strych and arsenic. Milk and vegetables.

THE SUPREME COURT DECISION ON THE CORPORATE RIGHTS OF THE AMERICAN MEDICAL ASSOCIATION.

In 1910 the state's attorney of Cook County (Chicago) was petitioned to institute "quo warranto" proceedings against the American Medical Association on the grounds that the Association's affairs were being conducted illegally in that its officers were elected at annual sessions held outside of the state of Illinois. The state's attorney refused to take action in the matter, and later the attorney general of the state, who was appealed to, also refused to act. January 5, 1911, mandamus proceedings were begun in the Circuit Court of Cook County, Illinois, to compel the state's attorney to initiate the quo warranto action which he had declined to institute. Until December 20, 1915, the issue was between the parties asking for the "mandamus" and the state's attorney of Cook County, Illinois; the point at issue being the technical one as to whether the state's attorney was compelled to act or had discretionary authority in the matter. The case went through the lower courts and finally was carried to the Supreme Court of Illinois, which in December, 1915, refused to hear arguments on the merits of the cause as it related to the American Medical Association, but ordered the Circuit Court to take up the original quo warranto proceedings designed to raise the question whether or not Illinois corporations "not for profit" are compelled to hold their elections and conduct their business within the confines of the state. Up to this point the American Medical Association was not technically interested in the controversy; now, however, it became a party in the action. Quo warranto proceedings against the members of the Board of Trustees were instituted in the Circuit Court of Cook County, Illinois, which after trial rendered a decision favorable to the Association. The case was then carried to the Appellate Court of Illinois, which confirmed the decision of the Circuit Court. An appeal was finally made to the Supreme Court of Illinois, which last week (April 16) rendered its decision, settling the question. This decision is entirely satisfactory so far as the Association is concerned. One paragraph of the opinion reads:

"It seems reasonably to follow that if a corporation not organized for pecuniary profit may hold meetings at stated times outside of the state of Illinois, composed of delegates selected by the constituent associations, for the transaction of business of the corporation, it is not unlawful to authorize and provide for the election by said house of delegates of trustees of the corporation. The American Medical Association was organized solely for the purpose of the advancement of medical science. Its purpose was to improve methods for the treatment and prevention of diseases of the human race. Its usefulness for these purposes would be seriously interfered with, if not absolutely destroyed, if it could not provide for the election of trustees from the most efficient men in the Association throughout the United States, by delegates selected by the constituent associations from the various states in the Union. Such authority to the house of delegates is conferred by the by-laws and is not in conflict with or prohibited by the constitution or laws of Illinois relating to corporations not for pecuniary profit."

The decision is important not only to the American Medical Association, but also to all organizations incorporated under the law of Illinois—in fact, of any state—governing corporations "not for profit."—*Jour. A. M. A.*

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

Editorial Correspondence, Books for Review and Exchanges should be addressed to the Editor; Advertising Correspondence to the Business Manager.

Advertising matter must be received by the 15th of the month preceding date of issue.

Advertising rates furnished upon application, to the business manager, J. F. Hawkins, M.D., 114 Westminster Street, Providence, R. I.

SUBSCRIPTION PRICE, $2.00 PER ANNUM. SINGLE COPIES, 25 CENTS.
Entered at Providence, R. I. Post Office as Second-class Matter.

RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

JOHN CHAMPLIN	*President*	Westerly
GARDNER T. SWARTS	*1st Vice-President*	Providence
JOHN M. PETERS	*2d Vice-President*	Providence
JAMES W. LEECH	*Secretary*	Providence
W. A. RISK	*Treasurer*	Providence

DISTRICT SOCIETIES

KENT
Meets the second Thursday in each month

H. BARTON BRYER	*President*	Natick
JAMES M. BODWELL	*Secretary*	Phenix

NEWPORT
Meets the third Thursday in each month

EDWARD V. MURPHY	*President*	Newport
A. CHACE SANFORD	*Secretary*	Newport

PAWTUCKET
Meets the third Thursday in each month excepting July and August

ARTHUR H. MERDINYAN	*President*	Central Falls
CONRAD E. THIBODEAU	*Secretary*	Pawtucket

PROVIDENCE
Meets the first Monday in each month excepting July, August and September

WILLIAM F. FLANAGAN	*President*	Providence
CHARLES O. COOKE	*Secretary*	Providence

WASHINGTON
Meets the second Thursday in January, April, July and October

A. B. BRIGGS	*President*	Ashaway
W. A. HILLARD	*Secretary*	Westerly

WOONSOCKET
Meets the second Thursday in each month excepting July and August

EDWARD L. MYERS	*President*	Woonsocket
E. F. HAMLIN	*Secretary*	Slatersville

Section on Surgery—2d Wednesday in each month, Dr. F. G. Phillips, Chairman Dr. Peter P. Chase, Secretary and Treasurer.

Section on Diseases of Children—3d Tuesday in each month, Dr. Henry E. Utter, Chairman; Dr. J. S. Kelley, Secretary and Treasurer.

Section on Gynecology and Obstetrics—3d Wednesday in each month, Dr. C. W. Higgins, Chairman; Dr. E. S. Brackett, Secretary and Treasurer.

Section on Medicine—4th Tuesday in each month, Dr. D. Frank Gray, Chairman; Dr. C. W. Skelton, Secretary and Treasurer

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President, Dr. Harlan P. Abbott, President; Dr. C. J. Astle, Secretary-Treasurer.

NOTICE

The House of Delegates having voted that the dues shall be $10.00 for 1918, the Treasurer desires to call the members' attention to Article IV Sec. 6 of the By-Laws: "Every Fellow shall annually contribute the Annual dues and the same shall be due and payable to the Treasurer, January first of each year."

EDITORIALS

SCIENTIFIC MEDICINE AND THE WAR.

In this number of the JOURNAL appears an article which represents the experience gained from examination of registrants in the recent draft. It is the first attempt in this state to utilize for scientific purposes the wealth of material furnished by this remarkable experiment in democracy, and as such is highly commendable. Draft examinations present unique features entirely different from the examinations in civil practice. In the latter case the patient is only too willing in most instances to afford the physician every opportunity of obtaining a full history

and a thorough examination. He wishes to aid the physician in every way. With the drafted men, the conditions are exactly the reverse. The general tendency is to endeavor to escape the necessity of serving as cannon fodder, although there are fortunately many notable exceptions to this rule. Consequently the examiner is put upon his mettle, and is forced to draw his conclusions largely from the physical examination and the general survey of the man in question. This is the first examination of the young manhood of the nation as a whole. College students, applicants for the army or militia, and, to a certain extent, industrial workers, have been examined in the mass, but the conclusions drawn, if any, have never been placed before the medical profession in a satisfactory manner. We shall know much more about the health of our men as a result of this war. With the improved hygiene in working and living conditions which will inevitably follow, the efficiency, health and happiness of our people will be correspondingly improved.

The great strides already made in the treatment of injuries and of disease are too well known to bear comment. It is a trite saying that the war has speeded up activities and invention in all lines of endeavor. It is particularly true in the case of medicine and surgery. The treatment of many injuries and diseases has already been revolutionized, and no one can predict the progress which will have been made by the end of the war. The interval elapsing between the end of the medical or surgical treatment and the resumption of work by the patient has always been one of the loose ends of our art. It has never been anyone's business to help the invalid to come back. Now with the establishment of reconstruction centres, each having a physiotherapeutic plant for treatment, curative workshops and trade schools, and with the cooperation of federal employment bureaus, the man will be guided and taught until he is self-supporting. It is encouraging to feel that the cripples of the present war will not be allowed to drift and to fill our institutions with derelicts as in previous wars, but will become respectable and self-supporting citizens.

THE LIFE EXTENSION INSTITUTE.

The Doctor is accustomed to competition, if one may thus dignify the advertising methods of the quack and charlatan, but it is not often that there is enlisted as an active competitor such eminent men as an ex-president of the United States and a professor of political economy of a great university. It is safe to assume that William H. Taft and Irving Fisher have not allowed the use of their names in the advertisement of the "Life Extension Institute" without a knowledge of what it implies to the average reader of a newspaper, and of course they are familiar with the aims and purpose of the "Institute." In the event that they are ignorant of the methods used, or that their names are used without authority, they should see to it that their reputation and influence are not capitalized for purely commercial interests. If their names are used with authority——, but let us hope they are not.

In a recent issue of the *New York Times* this is what is claimed: "The Institute's system of examination and reports was formulated in consultation with the members of the Hygiene Reference Board (whatever this may be), men who have for years been engaged in analysing human lives and the influences that impair them, and the system has been standardized from the Institute's wide experience in examining many thousands of individuals. It makes no difference where you live. The Life Extension Institute comes to you wherever you are. It has an experienced staff of examining and reviewing physicians in its main office in New York, a branch office in Chicago, and a staff of more than 5000 physicians throughout the United States and Canada.

"The cost of membership in the Life Extension Institute is low, because of its humanitarian character and national ideals.

"Examinations of subscribers who live in New York City or vicinity are made at the head office of the Institute. Woman physicians are available in the main office for the examination of women members who prefer them.

"Membership entitles you to the following:

"1. A complete bodily survey which includes the Institute's Standard Physical Examination of the eyes, ears, nose, throat, mouth, teeth, tongue, lungs, heart, circulation, skin, glands, stomach, liver, abdominal organs and general bodily condition. Also examination for evidence of rupture, varicose veins, faulty posture, flat-foot, spinal curvature, deformities and asymmetries-test of the vision and hearing and of the brain.

and nervous system for paresis, locomotor ataxia and other central nervous afflictions or nervous instability—height, weight, chest and abdominal measurements—blood pressure by the Auscultatory Method.

"2. Four chemic and microscopic examinations of the urine a year, by means of which a close watch is kept upon your kidneys in relation to your general physical condition.

"3. Hemoglobin Blood Test for anemia.

"4. Confidential detailed reports of your exact physical condition with a personal letter from one of our reviewing physicians commenting on your whole case, together with special health literature covering the impairments noted in the report.

"5. Suggestions as to proper diet with appropriate diet lists.

"6. Instructions covering appropriate exercises with diagrams.

"7. Keep-Well Bulletins covering your particular needs.

"8. The Monthly Health Journal of the Institute entitled 'How to Live.'"

In short, the Institute proposes to usurp the functions and duties of the physician, and, if the statements are true, and they have 5,000 physicians enrolled as experts, there must be some in Rhode Island. Do you know them, or did you ever hear of them? Is it true that they number among their consulting staff, as they say they do, the Surgeon-General of the Army, Navy, and Public Health Service, several ex-presidents of the American Medical Association and Commissioners of Health, and do they ever submit to them matters of scientific policy and educational material as they claim to do?

If your opinion is asked regarding the Life Extension Institute, recall the experience of a prominent physician who was routed out of bed to respond to the question, "Can you tell me where I can find a good doctor?"

THE IRREGULAR CULTS IN THE WAR.

It is a source of satisfaction to all physicians that the health of our troops is under the care of the regular members of the profession. On the other hand, there is keen disappointment in the ranks of the osteopaths, chiropractics, Christian Scientists, and the other cults too numerous to mention. They had hoped to be invited to administer their particular form of therapy in some part of the army, presumably in base hospitals at cantonments, as they would hardly expect to be allowed to care for the wounded at the front. Of course, the Surgeon-General has been charged with favoritism in allowing only those holding the degree of M. D. to become medical officers. The term of "medical officer," by the way, is a fine one. It does not oblige a man to consider himself a surgeon whether or no, and it makes no invidious distinction between the surgeon and the physician. The Surgeon-General is not showing favoritism. He is limiting his choice to the medical profession as is incumbent upon him. This is not a time for trying out new systems of treatment. It is a time to rely upon that system of medicine which has proved the standard for countless ages, a system which has never wavered from the scientific principles and high ideals of Hippocrates, although it has halted at times over some fads of its own. If a man is not feeling well, he may accept the advice of friends or the drug clerk, but when he is really ill, he calls a doctor. When the nation has its back to the wall, it calls on the regular medical profession, as it always has done in the past, and will continue to do in the future.

There is another insinuation which would be too absurd for consideration were it not for the many anxious parents whose sons are exposed to camp diseases. The anti-vivisectionists are claiming that the great prevalence of camp pneumonia and bronchitis is due to the fact that the boys have received inoculation with typhoid and paratyphoid vaccines. Arguments and statistics showing that the great scourge of previous wars—typhoid fever—has been practically wiped out in modern warfare by such prophylaxis are of no avail with this class of citizen. Scientific facts do not appeal to him. Here is an opportunity for all physicians to allay the fears of anxious parents whose sons are serving their country, by explaining the true facts regarding camp diseases, and to point out the great care taken by the medical corps to preserve the health of our troops. In no previous war has the medical corps been spurred on to greater action, and never has it achieved such splendid results. A finer medicine and surgery awaits the dawn of peace.

MORE MEDICAL OFFICERS.

Every physician by now must be aware of the recent urgent call from the Surgeon-General's office for 7,000 more medical officers. There are commissioned to date a little over 18,000 physicians in the Medical Reserve Corps. Two facts account for this unusually heavy call for more physicians. In the first place, the original estimate of seven medical officers per 1,000 of troops has been found today to be too low, and the ratio of ten medical officers per 1,000 troops is found to be necessary. Secondly, the weeding out process of physicians who are unfit for various reasons for military service is now at full tide, as sufficient time has elapsed to sift the wheat from the chaff, and in one week in April the Surgeon-General's office was faced with the disquieting information of 60 new enlistments against 70 discharges, a net loss of 10 medical officers in one week. Obviously, something must be done, and that something is that there must be a notable increase in the number of medical enlistments if our fighting boys are to have the trained medical care that is their right.

Rhode Island has done as well as other communities—the low rank among the states in percentage of enlistments in relation to medical population being due to split decimals of percentage rather than to any gross difference from her sister states. But we have not done enough. We must furnish *now* at least 50 more medical officers as our quota.

The experience of Rhode Island is that of the states all over the Union—the enlistments are coming from the two extremes of the medical profession, namely, those up to 31 years of age and secondly those over 45 years of age. It is no aspersion upon the patriotism of the first group to note that their services would be demanded anyway under the Selective Service Act. Rather it is a reproach that the men between these two ages are not coming forward for service. You men between 30 and 45 years, look this thing in the face! Your country calls you. Your young brother is in the trenches, and are you going to deny him your help because you "have just got a practice going in good shape?" Everyone of us must take this question right home to ourselves and earnestly and honestly decide where his duty lies. No matter what pressure is brought to bear—and it will be and soon—every man must fearlessly face the decision in his own heart.

Out of a total medical population of 772, Rhode Island has commissioned 128. But at a conservative estimate there are 350 men under the eligible age of 55 years. Can anyone doubt that the Nation's call for 50 more doctors from Rhode Island will meet with anything less than a prompt response?

A MEDICAL SURVEY.

The American Medical Association will shortly publish a very thorough and accurate survey of the medical resources of the nation by states and counties which will serve as a basis to compute the quota of physicians each section should furnish for the armed forces of the country. This survey will cover the population—civil and medical—the names of men holding commissions, those who have applied for commissions but have been rejected, and those who have been discharged, and those men over 55 years of age.

The decision as to which men within the age of eligibility should apply for commissions and which should remain for indispensable civilian needs will be a grave one, and the officers of the State and District Societies are urged to give the fullest and promptest support to the "drive" which is to be launched for the purpose of increasing medical enlistments.

SOCIETIES

DISTRICT SOCIETIES

Providence Medical Association.

May 6, 1918.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library on May 6, 1918. The meeting was called to order by the President, Dr. William F. Flanagan, at 9 p. m. In the absence of the Secretary, Dr. F. M. Adams was appointed Secretary pro tem. There were present at the meeting 33 members. The records of the preceding meeting were read and approved. A communication was read from the Providence Housewives' League inviting the members to a lecture by Dr. E. V. McCollum of Johns Hopkins University on May 17, 1918.

Dr. Dennis C. O'Leary and Dr. Ransom H. Sartwell, having been approved by the Standing Committee, were elected members of the Association.

The first paper of the evening, entitled "Some

Cardio-Vascular Conditions in Connection with Advisory Draft Board Examinations," was read by Dr. George S. Mathews. The paper was discussed by Drs. Mowry, Gray, Burgess, Adams and H. A. Jones.

The second paper, entitled "State Hospital for Mental Diseases with Lantern Slides," was read informally by Dr. Arthur H. Harrington.

Dr. H. A. Jones presented a case of pellagra, giving a detailed history of the case.

The meeting adjourned at 10:45 p. m. A collation was served.

FRANK M. ADAMS, *Secretary, Pro. Tem.*

WASHINGTON COUNTY MEDICAL SOCIETY.

The quarterly meeting of The Washington County Medical Society was held at the Colonial Club, Westerly, April 11, 1918.

Prior to the business session the Society was entertained by the President, Dr. A. B. Briggs, at the Princess Theatre. Such entertainment consisted of moving pictures depicting an operation for Exophthalmic Goitre, by Albert J. Ochsner, M. D., and an operation for Complete Perineal Laceration, by Edward J. Ill, M. D.

The Committee on Lodge and Contract Work reported progress and was continued.

The Child Welfare Movement was presented, but it was thought best to leave the matter in the hands of the Westerly Physicians' Association.

Luncheon at the Club followed adjournment.

W. A. HILLARD, M. D., *Secretary.*

WOONSOCKET DISTRICT SOCIETY.

The regular monthly meeting of the Woonsocket District Medical Society was held April 18, 1918, at the office of Dr. J. J. Baxter. The meeting was well attended. A general discussion took place concerning various matters of interest to the society.

It was voted to hold the next meeting at the Woonsocket Hospital, and a committee consisting of Drs. E. D. Clark, W. F. Barry and W. C. Rocheleau was appointed to procure a speaker for the occasion. Adjourned 10:30 p. m.

E. F. HAMLIN, *Secretary.*

KENT COUNTY MEDICAL SOCIETY.

The regular meeting of the Kent County Medical Society was held in the rooms of the Nurses' Association at River Point, R. I., April 18, 1918, Dr. H. Barton Bryer presiding. Minutes of the last meeting read and approved. Bill H. 651, introduced by Dr. O'Meara of Providence providing for the appointment of a commission to investigate the use of habit-forming drugs, and Bill H. 679, introduced by Dr. O'Meara of Providence, requesting the State Board of Health to consider the advisability of establishing medical reciprocity, were discussed and a resolution favoring them was ordered sent to the proper officials by the Secretary. Dr. Frank M. Adams of Providence read a paper entitled "Nose and Throat Findings in Some Cases of Endocarditis." This report was based largely upon his findings in examining recruits for the United States Army. A vote of thanks was extended to Dr. Adams. Voted to adjourn.

JAMES M. BODWELL, *Secretary.*

MISCELLANEOUS

MOBILIZATION OF THE RHODE ISLAND HOSPITAL UNIT.

Nine physicians in the Navy Base Hospital No. 4, formed in Rhode Island some time ago under direction of Dr. George A. Matteson, have been ordered into active service and left May 15 for Newport for a course of preliminary instruction. Nine others are expected to go within a short time, and the 86 civilian members of the unit were ordered to report at Newport May 20.

The physicians now at Newport are Lucius C. Kingman, William H. Buffum, Alex M. Burgess, Paul Cook, Elihu S. Wing, Henry L. Johnson of Westerly, Frank H. Mathews, Leon S. Gilpatrick and Albert A. Barrows. The nine physicians who are to go later are Halsey DeWolf, Roland Hammond, Frederic V. Hussey, Joseph C. O'Connell, Lewis B. Porter, Clinton S. Westcott, George A. Matteson, William P. Buffum, Jr., and George C. Eckert of Newport. Dr. Eckert is now at sea and may not be able to go with the unit. George T. Holt, D. D. S., will be dental surgeon with the unit.

Following are the names of the members of the unit, with the branch of the service to which they have been assigned and their ranks:

George A. Matteson, Lieutenant Commander, Director and Chief of Surgical Service; Halsey DeWolf, Lieutenant Commander, Chief of Medical Service.

Lieutenants, Senior Grade—Lucius C. Kingman, surgical service; Roland Hammond, orthopedic surgeon and roentgenologist; Lewis B. Porter, eye, ear, nose and throat surgeon; Frederic V. Hussey, Joseph C. O'Connell, Albert A. Barrows, surgical service; Clinton S. Westcott and William H. Buffum, medical service.

Lieutenants, Junior Grade—Alex M. Burgess and William P. Buffum, Jr., medical service; George H. Eckert, Elihu H. Wing, Paul Cook, Henry L. Johnson, Frank H. Mathews and George T. Holt, D. D. S.

Hospital Apprentices—Edwin Anderson, Morris H. Atkins, Robert Aylesworth, Fred Barker, George H. Bristol, Linton L. Brown, Harry V. Byrne, Peter R. Campbell, Edwin L. Carlson, John R. Cheetham, Byron R. Cole, George N. Dunbar, Joseph H. Fagan, Wilfred H. Hammill, Albert C. Holden, George L. Howe, Williamson Howe, Walter F. Joslin, William McK. Kelso, Joseph T. Kershaw, James J. Lavery, Clifford L. Lloyd, William H. McKenna, John H. Magee, Harry B. Murray, John W. Moore, Robert Nelson, Harry A. Noel, Cleophase Noel, Fred E. O'Connell, Herbert W. Pecker, Charles H. Philbrick, George C. Sims, Rudolph Swanson, James F. Sweeney, Edmund J. Tanner, Fred Walker, Howard E. Williams, Sidney W. Wray, Harvey E. Wellman.

Petty Officers—George F. Bliven, paymaster clerk; Charles J. DeCromer, commissary steward; Steven E. C. Kendrick, chief yeoman; William J. Hammond, yeoman, first class; Francis D. O'Connell, yeoman, second class; Carl A. Knowles, yeoman, first class; Manuel Bloom, yeoman, second class; Henry H. Aldrich, electrician, third class; Harold E. Peck, electrician, third class; John Rhodes, plumber; Thomas Clarke, plumber; Wilfred Ducharme and Norman Thorpe, carpenters; Alfred Buckley, Jr., and Cyril Henius, machinists' mates.

Cooks—John Marcado, Peter C. Thorne, Christopher T. Nolan, James Cameron, Jr., Frank D. Hurley, William F. Durvin, William H. Shaw, Robert C. Calvin, George A. Carey, Joseph E. Donahue, Peter A. Carr, Lawrence H. Smith and M. C. Montneau.

Mess Attendants—William Buchart, William Cashin, Thomas A. Corbett, Eugene S. Duffy, James J. Duffy, Edward Kilduff, Philip Lavery, Charles McPhillips, Edward Madden, Archibald M. Morrison, Francis H. Norton, Ralph L. Smith, Thomas Rhodes, W. H. Ward, Thomas J. Welch, Russell O'Neal, John P. Ormand and Ralph F. Mayberry.

HONOR ROLL.

Lieut. Joseph W. Bannon, M. R. C., U. S. A.
Capt. Remington P. Capwell, M. R. C., U. S. A.
Capt. Frank A. Fearney, M. R. C., U. S. A.
Capt. John B. Ferguson, M. R. C., U. S. A.
Capt. Winthrop A. Risk, M. R. C., U. S. A.

AMERICAN PROCTOLOGIC SOCIETY.

Owing to conditions brought about by the war, the American Proctologic Society has decided not to hold its meeting in Chicago on June 10-11. The society will probably not meet again until after the war is over.

Very truly yours,
COLLIER F. MARTIN,
Secretary-Treasurer.

LETTER TO THE EDITOR

SUGAR, ALCOHOL AND GLYCERIN IN MEDICINES.

To the Editor:

As you are aware, there is urgent need for the country to use with the utmost care, our stocks of sugar, alcohol and glycerin. It has come to our attention through the work of Prof. Wimmer of New York and Mr. F. A. Upsher Smith of St. Paul, Minn., that it is possible to reduce largely the amount of these materials used in medicines by the adoption of infusions, decoctions and solid forms of medication, such as capsules, in place of elixirs, syrups, fluid extracts and tinctures.

As the choice of medicine rests with the physician, we feel that the extent to which this conservation program is successful rests largely with the physician, and we urge upon physicians throughout the country the desirability of prescribing extemporaneously wherever possible.

It is really desirable that the editors of Pharmaceutical and medical journals, deans and professors of colleges, and secretaries of state, county and city associations should see that the matter is fully discussed at meetings of physicians and druggists and should do all within their power to assist this conservation movement, which cannot fail to be of material assistance to the country, since "Food Will Win the War."

May we depend upon you for your active cooperation in this matter?

Yours very truly,
UNITED STATES FOOD ADMINISTRATION.
Per Charles W. Merrill,
Division of Chemicals, Sisal and Jute.

BOOK REVIEWS

NOSTRUMS FOR KIDNEY DISEASES AND DIABETES. Prepared and issued by the Propaganda Department of The Journal of the American Medical Association. 47 pages; deals with 34 nostrums; illustrated. American Medical Association, 535 North Dearborn St., Chicago. Paper, 10 cents postpaid.

This is the latest pamphlet issued by The Propaganda Department of *The Journal of the American Medical Association,* as part of its work in giving the medical profession and the public the facts regarding different phases of the nostrum evil and quackery. Nostrums for kidney disease and diabetes are grouped together in one pamphlet, not because there is any essential relation between diabetes and kidney disease, but because the average quack makes no distinction between the two conditions and recommends his nostrum indiscriminately for both. It is not necessary to tell physicians that drugs will not cure either kidney disease or diabetes, but it is necessary to apprise the public of this fact. Whatever justification there may be for the sale of home remedies for self-treatment, there is no excuse either moral or economic for selling preparations recommended for the self-treatment of such serious conditions as diabetes and kidney disease. Every "patent medicine" sold for the cure of these diseases is potentially dangerous and inherently vicious. The pamphlet is an interesting and instructive one to put in the hands of the layman.

NEUROSYPHILIS. E. E. SOUTHARD, M. D., and H. C. SOLOMON, M. D. W. M. Leonard, publisher, Boston, 1917.

This treatise upon neurosyphilis is published as monograph number two by the Psychopathic Hospital of Boston. It portrays in excellent form 137 case histories, including focal cerebral syphilis, general paresis, tabes, feeblemindedness, the syphilitic with an intercurrent psychosis and cases which have shown merely minute changes in personality to the most profound injury to the adaptative mechanism in life. Anatomically the cases were divided into meningeal, vascular, parenchymatous, meningo-vascular, meningo-parenchymatous, meningo-vasculo-parenchymatous and a toxic irritative type. Those cases coming to autopsy are all carefully and clearly analyzed from the pathological standpoint and the clinical symptom-complex correlated with the pathological findings. Through this correlation of clinical symptoms and pathological findings, it is found that many tissue changes syphilitic in origin occur which did not evince corresponding clinical signs and vice versa. Such observations as these would call for speculation regarding the biological function of tissue, the cellular physiology and the general metabolic activities occurring in syphilis.

The authors have carefully tabulated the symptoms and their frequency as they occur in those disorders affecting the cord and brain, emphasizing their value. The diagnostic importance of a complete analysis of the spinal fluid and its relation to prognosis in treatment is carefully observed throughout the entire book. The interpretation of these findings bears comment as indicating a most careful observation.

The Sections on Puzzles and Errors and the Social and Medico-legal aspects show the crying need of a more thorough observation as to the onset of signs and symptoms when these patients are in the hands of the general practitioner as well as demonstrating the vast importance of "following up" many cases for the welfare of society.

Under treatment in addition to the intramuscular and intravenous methods, the discussion of intraspinal, subdural and intraventricular methods is carefully considered. It would appear that there is no hard and fast rule in the treatment of neurosyphilis, that every patient has his own syphilis and that any improvement or even a cure depends upon the interpretation of the case in its entirety and the institution, under sound judgment of the therapeutist, of intensive treatment.

The chapter on neurosyphilis and the war is extremely interesting and shows the absolute necessity of the careful observation and the proper interpretation of mental symptoms in drafted men and urges adequate provision for care and treatment.

The careful work reported in summary form in this book is based upon a decided appreciative understanding of neuropathology, neuroserology and psychopathology, and should be of considerable help to the clinician as well as the therapeutist. F. J. F.

THE RHODE ISLAND MEDICAL JOURNAL

The Official Organ of the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

VOLUME II
NUMBER 7
Whole No. 121
PROVIDENCE, R. I., JULY, 1918
PER YEAR $2.00
SINGLE COPY, 25 CENTS

ORIGINAL ARTICLES

PRESIDENT'S ANNUAL ADDRESS.*

By JOHN CHAMPLIN, M. D.,
Westerly, R. I.

To enjoy the honor and distinction which comes with the highest office in the gift of this Society, representing as it does the medical profession of this state, to be enrolled with the sterling men who have in turn filled the office of President of this Society for more than a century, fills me with the greatest gratitude and a sense of receiving much I so little deserve.

Custom has ordained and our by-laws prescribe that the retiring President shall deliver an annual address before the Society at the close of his term of office, in which he shall give an account of his stewardship, review the events of former years, draw conclusions from past lessons and advocate such changes and improvements for the future as he may see fit.

In times of peace this course seems very proper, but at this time, when we have become participants in the most destructive war the world has ever known, when our country is calling for more and still more medical men for its service, it is a time for few words and much earnest action on the part of each one of us.

With a brief resumé of the work done during the year the meeting will be turned over to the consideration of patriotic and medical questions concerning the war, which are vital to everyone of us, by men who are experts in their departments.

The regular meetings of the Council and House of Delegates have been held and the usual routine business transacted. Two large delegations, which appeared once before the Governor and once before a joint committee of the Senate and House of Representatives on matters of medical appointments and legislation, were highly successful.

At the regular general meetings of the Society we have enjoyed not only the scientific papers and clinics, but most interesting addresses by representatives of the Army and Navy Departments.

The financial condition of the Society is good, expenses being fully met by the yearly income. The remitting of the yearly dues of our members in service is being cared for, by increasing the annual dues to $10.00. The endowment fund has been increased during the year, enabling $2,600 in bonds to be cancelled. It is hoped the few bonds still outstanding will soon be donated or paid by the sinking fund. Our well-managed MEDICAL JOURNAL has been an honor to the Society. In spite of existing conditions, there has been a slight growth in the membership of the Society.

GROWTH OF SOCIETY.

	June, 1917.	1918.
Active members	423	426
Non-resident	27	25
Honorary	10	9
	460	460
New members added 1917-1918		8

Deceased during year: Mary E. Baldwin, Newport, R. I., November 21, 1917; Mary L. Farnum, Woonsocket, R. I., December 31, 1917; Wilfred W. Browne, Woonsocket, R. I., January 29, 1918; Frank E. Burdick, Providence, R. I., December 26, 1917; James L. Phillips, Providence, R. I., April 20, 1918; Philip K. Taylor, Kingston, R. I., August 22, 1917. Honorary member, Ramon Guiteras, New York, December 13, 1917.

The medical enlistments from the State of Rhode Island in the Army and Navy Medical Corps, while the best in New England, have not been sufficiently high. Listen to these statistics, and make them read as they should, by doing your whole duty at once.

*Read before the Rhode Island Medical Society, June 6, 1918

DATA ON RHODE ISLAND IN RE MEDICAL ENLISTMENTS.

Total No. of physicians in Rhode Island			751
Total No. of physicians in Rhode Island who accepted commissions	Army	118	
	Navy	19	
			137—18.2%
Total No. of membership R. I. M. S.			426
Total No. of membership R. I. M. S. who have enlisted	Army	56	
	Navy	14	
			70
Total per cent. of members enlisted			16.5%
Total No. of members R. I. M. S. eligible for enlistment			253

From these statistics, which are similar to those of most states, it is apparent that the medical profession has not as yet done its full duty. From the statistics of the wounded and injured, which are coming in daily from the front, from the statistics furnished us by the Surgeon Generals of the army and navy, one is greatly impressed with the urgent need of medical and surgical attention, and the great lack of men to perform that service.

These men must come from our ranks; there is no other source. England has not produced a doctor in four years; neither has France. Our own colleges at the present rate of graduation can barely take care of the wastage in the Medical Corps as now constituted. With this fixed and exceedingly limited supply, with an unlimited and constantly increasing demand, both from our own War Departments and those of the allies, what is the clear duty of every physically sound physician and surgeon in this country who would make good the tradition of his profession, who has one drop of red blood in him? Will his answer be the M. R. C. or does his age and physical condition place him in the Volunteer Medical Reserve Corps? Can be afford any other classification?

THE ROENTGEN METHOD OF GASTRO-INTESTINAL INVESTIGATION.*

By W. Louis Chapman, M. D.,
Providence, R. I.

It is the purpose of this brief paper to call to your attention some considerations which are sufficiently recent in acceptance by gastro-enterologists to merit your attention and discussion. At the last meeting of the A. M. A., in the discussions following papers read in the Section on gastro-enterology it was quite evident that the information I have to offer herewith is not at all commonplace or well understood, either by the medical profession as a whole or by specialists in particular.

One's information in any case consists of subjective and objective symptoms,—those things which the patient relates and those which the investigator observes. Both are of importance, but the latter of by far the greater importance. The writer finds that patients presenting themselves for study are far from well informed as to their own condition or symptoms and that it is quite necessary to check up their histories by careful questioning and by the physical signs which the roentgen method reveals.

The patient's story should be elicited with as little coaching as possible. It should be verified by questions on succeeding days and will often be found to change with surprising frequency. I do not agree with those who claim that the patient's story is ninety per cent. of the case in gastric ulcer. I have repeatedly had patients come with a typical history of gastric ulcer, but the direct method showed a perfectly normal stomach, and with a very little treatment, together with the announcement of the findings to the patient, the stomach symptoms improved. I use several plates of such patients to demonstrate the normal stomach contour and compare with pathological findings. Again, some of the worst cases of pyloric obstruction present but few symptoms and but little discomfort. But the roentgen method shows almost complete 24-hour retention of the barium meal.

Without a roentgen examination it is impossible to appreciate the patient's story. He may claim pain at a locus usually significant of the middle of the transverse colon and the screen or plate show the transverse colon in the true pelvis. His distress may appear to be at the lower border of the greater curvature and examination in the upright position shows marked visceroptosis. In the important matter of six-hour residue, upon which so much depends, the plate or fluoroscope is a much more reliable means and far more pleasant to the patient than the tube, which is easily plugged up, or may be so doubled upon itself that its end is above the surface of the stomach contents.

The direct method, sometimes called the American method, consists of an X-ray study directed along the particular lines which will appear forthwith. It has for its object the

*Read before the Providence Medical Association, June 3, 1918

demonstration of the actual lesion. At some large clinics in America the latest view as to the value of the chemical studies is that it is about ten per cent. of available information. It is therefore not to be overlooked. But in the wealth of information made possible by the roentgen method it has been found that we must challenge the time honored and supposedly secure teaching that carcinoma of the stomach causes a complete upset in the chemistry of the gastric contents, for numerous cases have been found of carcinosis with normal gastric contents. It has furthermore been found that gastric achylia is compatible with health and that it exists often without causing any symptoms. This is a story in itself.

In the direct method it is possible to visualize the stomach and intestines by means of the fluorescent screen and by photographic plates. This shows the orientation and movements and gives information which can be obtained in no other way.

It also gives a graphic record which is valuable not only in the case under study but also in the comparison with other cases. It is also a check upon the surgeon's findings and often a guide by which he may go.

Investigators are not entirely of one mind as to the use of the fluorescent screen. In hospitals where the clinic is large the cost of plates is almost prohibitive, and the screen is used almost entirely. Other observers use a number of plates in each case taking serial views which show every phase of gastric and intestinal movement. Still other observers, and these I think are of the largest number, use the combined method of both fluorescent screen and plates. Now roentgenologists have gone into this study with very great thoroughness and have become very expert in their work. There are but few exceptions to the almost uniform accuracy of diagnosis, and one of these is in the matter of gallstones. Some observers claim a very high percentage of correct diagnosis in gallstone investigations. The average observer, however, does not claim such high percentages.

The first step in the study of gastro-intestinal conditions ought to be a study of the mouth, and in any case that is at all obscure this should be an X-ray study. From the commercial houses comes the suggestion that if one takes a set of rays of the teeth in his cases of arthritis and gastric ulcer the results may be surprising. This is quite true. And it is also true that pus foci and granuloma cavities are occasionally found in patients who have had no trouble whatever with their teeth. Three times within a week have I found such cavities where the patient gave no history of pain or toothache, and all of these cases had recently been pronounced in good dental condition. I believe the idea that such conditions may be painless and cause no discomfort is new, at least it is new to me, and it illustrates again that we must soon accept the fact that subjective symptoms are misleading and that it is pathology that counts in the solution of a medical or surgical problem.

A very good method of routine examination, which may be modified to meet particular needs, is as follows: The patient takes an enema the night before the barium examination. Cathartics are not to be given, for we wish to observe the normal condition of the patient, free from drug influences or unusual motility. If it is found that there is spasm of the pylorus, atropin may be given at a subsequent examination but not in the first place. The next morning three ounces of barium sulphate is given in a glass of milk, and the patient also takes a plate of cereal with cream or milk and sugar and a cup of coffee or chocolate. Six hours later the stomach is viewed in the fluoroscope and a plate made. Three ounces of barium sulphate are again given, this time in buttermilk, and the patient is viewed in the act of swallowing and the stomach movements are noted. The Mayos use potato pap: at Battle Creek a mixture of hot malted nuts and oriental clotted milk is used, but buttermilk either from a dairy or made with lactone tablets seems to be excellent for the study of the pylorus either with plates or the screen. After about an hour's study of the stomach, in which a number of plates is made, the patient may be dismissed to return the following day, at which time the opaque meal should be in the large intestine. After this time a plate is made each day, and if after four days there is no tendency to evacuate the colon I usually order a soap and water enema. It is at this stage of the examination that the unreliability of the patient's story is so often apparent. The constipated are found to be normal, the normal constipated, and they can't mislead the observer because seeing is believing. If there is a four days' colonic stasis it is enough

to make the diagnosis, and any further delay in removing the ingesta is harmful to the patient and in most cases unnecessary. It is also an unnecessary expense to the investigator, for he usually gets his pittance for the entire examination and not in accordance with the number of plates he takes.

If the examiner is not satisfied with his study of the colon a barium enema is given and plates made immediately. But little experience with this method of examination is necessary to show the fallacy of the "high enema," for the barium mixture completely fills the large intestine and often invades the small in a very few minutes. Reversed peristalsis is a very common phenomenon.

With suitable fluoroscopic illumination the screen examination is often very satisfactory. The observer sees the opaque meal passing through the esophagus and entering the stomach, accumulating in its lowest portion. If there is any esophageal stenosis it is usually apparent, as is the position of the stomach with reference to the diaphragm and the iliac crests. No marker should be placed upon the umbilicus, for the iliac crests should serve as geographical guides. Gastric movements usually begin at once. The peristaltic waves are readily seen, together with the distention of the first portion of the duodenum. This illustrates the error of the teaching that the food stays in the stomach for so many hours and then the automatic trap door opens, the sphincter relaxes and out goes the food, suitably prepared for the later processes of digestion. The hand of the examiner, by careful palpation, may find tender points and correctly record them with reference to the outline of the stomach. The patient may be turned in various ways to better observe the outlines of the duodenum. At the same time the position of the opaque mixture given six hours before is to be noted. It is the writer's invariable custom to observe the thorax at this time with the screen and to take a plate at the time of making plates of the stomach directly after the fluoroscopic examination.

Plates of the pylorus and duodenum should be made by a short exposure, less than a second, and better still less than a half second. In this way the record is without distortion from movement. Suitably exposed plates at once show by their outline the contour of the antrum, cap and pileus with sufficient detail to show any filling defect. It is in these plates together with motor phenomena that we have our best opportunity for the early discovery of carcinoma of the pylorus or antrum. The fact that the roentgen prediction is not always fulfilled has nothing at all to do with it. The direct method is far more reliable than any other method and the pathology of cancer of the stomach together with what experience interpreted by our present conception of stomach problems shows us why so many cases of gastric cancer present no symptoms whatever until the condition is advanced. We have a very similar and analagous syndrome in the study of chest pathology. No one can be familiar with the radiographic work done on the chest in the past ten years without being impressed with the fact that no study of a chest problem is complete without a roentgen record; it is equally true that plate or fluoroscopic findings alone are not sufficient and that they must be confirmed by comparison, clinical findings and the assemblage of definite physical signs.

In some clinics the case history is related at the time of operation. It might read something like this: This patient has had more or less indigestion for years. Occasionally there is a sharp pain in the stomach when it is empty which lasts for an instant. Medicines help him somewhat and the pain is relieved by taking food or by sodium bicarbonate. He does not vomit. Investigation shows a hypertonic stomach which is not prolapsed. Six hours after ingestion the motor meal has but partly passed through, leaving a residue of more than half. Peristalsis seems to be interrupted at an hour glass deformity. Plates show this deformity with a filling defect opposite the incisura. Pylorus and pileus show normal contour in a number of plates. The appendix is long, tortuous and turned upon itself and remains filled with barium for forty-eight hours. The operation will consist of a resection of the ulcer and probably of the incisura and the removal of the appendix.

Or it may be that the history would be something like this: The duodenal cap and pileus do not show in any plate. The antrum shows a filling defect of over two inches, constant in all plates, with the characteristic finger prints in putty contour and pathognomonic of carcinoma of the pylorus. The operation will probably consist of resection of the diseased area, nearly a half of the stomach, followed by either posterior or anterior gastro-enterostomy.

Roentgen plates and diagrams are exhibited

for the instruction of the observers. In this way the surgeon knows what he is about to do, what kind of a case he has to deal with and how he may proceed without loss of valuable time which may be needed later in the course of the operation. The question may be asked,—can this information be obtained in any other way? I think not. The slides which I now show illustrate this method. A normal stomach in a patient who had the story typical of gastric ulcer. An enormously enlarged cecum causing intestinal stasis. A carcinoma of the stomach causing very few symptoms. A ruptured gastric ulcer causing sudden death. An inoperable carcinoma of the stomach. And an appendix which had caused symptoms but no pain. These I think are convincing, but are only illustrative of the general run of cases in which a correct diagnosis may be made by this method.

The objection is often raised that an expert is needed to read and interpret X-ray plates. While this is true of some cases, it is equally true that a great many X-ray findings are not difficult of interpretation or description. The idea that X-ray work is enormously difficult and that but a gifted few are capable of doing it must go. The more familiar a surgeon is with shadowgraphs of the gastro-intestinal tract the more complete becomes his knowledge of the anatomy and orientation of those parts and the greater his skill in handling these problems. An X-ray study is or should be the associate of normal and pathological anatomy and in most cases operative findings are precisely in accordance with the plate or screen findings record.

Before suggesting warrantable and defensible conclusions it must appear that the good old days of three-minute interviews with patients who suddenly find themselves upon the sidewalk with a prescription or an envelope of tablets in their hands,—these days are gone. We must do something more than surmise that a patient has an ulcer or a cancer of the stomach; we must apply to our patients the well tried and established methods of diagnosis or we do not do our professional duty by them. If we do not care to take the necessary trouble it is better not to take the case. The fact that occasionally we fail to make a correct diagnosis does not show the method unworthy of use or confidence. It is unreasonable to expect the high percentages of correct diagnosis that is demanded by some. The direct method has given us far higher percentages than ever before and our knowledge of the hollow abdominal viscera owes more to the X-ray than to any other single diagnostic means.

Conclusions.

1. The roentgen method is an invaluable and indispensable method of gastro-intestinal investigation.
2. It is by far the best method of studying visceral orientation and of estimating gastric residues.
3. By means of the fluorescent screen gastric and intestinal contours may be observed and their movements studied.
4. Reliance should not be placed upon either plates or screen, but upon the combination of the two.
5. Plates and prints of reductions therefrom make a form of case record that cannot be surpassed.
6. The technique of the roentgen method should be that of well known investigators such as Case of Battle Creek, the Mayo Clinic, or George of Boston.
7. In all operations of election a thorough roentgen study of the abdomen should have been made and suggestions for investigation given to the operator.
8. Surgical findings should be fully recorded, that the roentgen record may be compared.
9. By the roentgen method other methods of gastro-intestinal investigation may be simplified and rationalized.
10. Physical signs are more valuable than symptoms, and the X-ray study suitably conducted serves as a valuable check upon the patient's story and claims.
11. The direct method offers the best and practically the only means of early diagnosis of gastric cancer.

MISCELLANEOUS

Dr. Harry S. Bernstein has resigned as State Pathologist, the resignation to become effective August 20, 1918.

Dr. F. Nolton Bigelow, who has recently been operated upon at the Hope Hospital, is convalescing favorably.

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

ROLAND HAMMOND, M.D., *Editor*
249 Thayer Street, Providence, R. I.

J. F. HAWKINS, M.D.
Business Manager
114 Westminster Street
Providence, R. I.

ALEX M. BURGESS, M.D.
JOHN E. DONLEY, M.D.
J. W. LEECH, M.D.
F. T. ROGERS, M.D.
} *Associate Editors*

Committee on Publication: ROLAND HAMMOND, M.D., *Chairman*; F. T. ROGERS, M.D.; W. A. RISK, M.D.; GARDNER T. SWARTS, M.D.; J. W. LEECH, M.D.

Editorial Correspondence, Books for Review and Exchanges should be addressed to the Editor; Advertising Correspondence to the Business Manager.

Advertising matter must be received by the 15th of the month preceding date of issue.

Advertising rates furnished upon application, to the business manager, J. F. Hawkins, M.D., 114 Westminster Street, Providence, R. I.

SUBSCRIPTION PRICE, $2.00 PER ANNUM. SINGLE COPIES, 25 CENTS.
Entered at Providence, R. I. Post Office as Second-class Matter.

RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

GARDNER T. SWARTS	*President*	Providence
JOHN M. PETERS	*1st Vice-President*	Providence
JESSE E. MOWRY	*2d Vice-President*	Providence
JAMES W. LEECH	*Secretary*	Providence
W. A. RISK	*Treasurer*	Providence

DISTRICT SOCIETIES

KENT
Meets the second Thursday in each month

H. BARTON BRYER	*President*	Natick
JAMES M. BODWELL	*Secretary*	Phenix

NEWPORT
Meets the third Thursday in each month

EDWARD V. MURPHY	*President*	Newport
A. CHACE SANFORD	*Secretary*	Newport

PAWTUCKET
Meets the third Thursday in each month excepting July and August

ARTHUR H. MERDINYAN	*President*	Central Falls
CONRAD E. THIBODEAU	*Secretary*	Pawtucket

PROVIDENCE
Meets the first Monday in each month excepting July, August and September

WILLIAM F. FLANAGAN	*President*	Providence
CHARLES O. COOKE	*Secretary*	Providence

WASHINGTON
Meets the second Thursday in January, April, July and October

A. B. BRIGGS	*President*	Ashaway
W. A. HILLARD	*Secretary*	Westerly

WOONSOCKET
Meets the second Thursday in each month excepting July and August

EDWARD L. MYERS	*President*	Woonsocke
E. F. HAMLIN	*Secretary*	Slatersville

Section on Surgery—2d Wednesday in each month, Dr. F. G. Phillips, Chairman Dr. Peter P. Chase, Secretary and Treasurer.

Section on Diseases of Children—3d Tuesday in each month, Dr. Henry E. Utter, Chairman; Dr. J. S. Kelley, Secretary and Treasurer.

Section on Gynecology and Obstetrics—3d Wednesday in each month, Dr. C. W. Higgins, Chairman; Dr. E. S. Brackett, Secretary and Treasurer.

Section on Medicine—4th Tuesday in each month, Dr. D. Frank Gray, Chairman; Dr. C. W. Skelton, Secretary and Treasurer

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President, Dr. Harlan P. Abbott, President; Dr. C. J. Astle, Secretary-Treasurer.

NOTICE

The House of Delegates having voted that the dues shall be $10.00 for 1918, the Treasurer desires to call the members' attention to Article IV Sec. 6 of the By-Laws: "Every Fellow shall annually contribute the Annual dues and the same shall be due and payable to the Treasurer, January first of each year."

EDITORIALS

ANNUAL MEETING OF THE STATE SOCIETY.

For the second time within the year the Rhode Island Medical Society has devoted a program to medical matters as pertaining to army and navy activities. It was eminently proper at this time in view of the urgent need of more medical officers for both branches of the service. The tone of the whole meeting was extremely inspiring. The address on the flag was soul-stirring; the needs of the army for more medical officers were clearly and succinctly stated; the past and

present glories of the navy were depicted in vigorous style. One could actually smell the salt air as the sonorous voice of the speaker filled the room, and could in imagination see him treading the quarter deck of a man-of-war, a commanding presence. The annual dinner was an unusually pleasant function. The cool and fresh surroundings were an agreeable change from the stuffy hotel banquet hall, and the entertainment of body and mind was both good and timely.

The suggestions of the Secretary in the printed proceedings regarding the character of future meetings should be taken to heart by all the members. Unless we are willing to die of dry rot we must produce more original work and put it in the form of papers which shall be read at our meetings. The importation of speakers from outside the state should be reserved for special occasions unless they have a message to impart.

SOMETHING NEW.

"There is nothing new under the sun"—true, if by new we mean nothing like anything which has been known before. But with a more liberal use of the phrase we find that almost everything is new. The present war, tanks, camouflage, and air raids, all have their analogues in history or literature, yet we must admit that these things are essentially new.

Dress up a twenty-year-old idea in a century-old principle which has always clothed some other idea, and presto!—you have before you a thing vitally new.

New facts always are hiding in old fields of research, waiting for changed conditions or for a man with a new brand of perseverance to bring them to light. In medicine the old fields are exceptionally fruitful, and therefore most thoroughly worked over, and frequently are the ones which best repay the efforts of the investigator. No one need hesitate to take up work in an old field, for very often new conditions, or the apparently fruitless efforts of the last investigators, have all but disclosed the newest and most valuable nugget of information.

Not long ago the study of pneumonia seemed but a thankless task. The pneumococcus appeared to be as well known an organism as the family cat. The application was made to investigations of a few old principles in a way never before carried out, and behold most of our views regarding the disease had to be modified. Now our old friend the hemolytic streptoccoccus, whom we thought we knew so well, appears as a cause of pneumonia, a type of pneumonia at present prevailing among the troops. Probably this streptoccoccus has been up to this sort of thing for years, yet from a medical point of view, we have a whole vista of new fields opened to us.

In medical research everywhere it is the same, everywhere there are facts—new, important facts, lying just around the corner, deftly camouflaged it is true, but ever ready to reward those of us who, having eyes, see.

TWELFTH-CENTURY QUACKERY.

Oliver Wendell Holmes, in one of his addresses, urges his hearers not to look with contempt on their old medical books: "The debris of broken systems and exploded dogmas," he says, "form a great mound, a Monte Testaccio of the shards and remnants of old vessels which once held human beliefs. If you take the trouble to climb to the top of it, you will widen your horizon, and in these days of specialized knowledge your horizon is not likely to be any too wide." With the hope of widening our own too narrow horizon we have been taking a look into some bypaths of the medical lore of the Middle Ages and we quote here an abstract that may amuse our readers. The book, a twelfth-century treatise, is entitled *De Adventu Medici*, or "The Doctor's Visit," and is attributed to Archimathaeus, one of the Masters of Salerno. Those who think that we moderns are especially adept in the art of dissimulation may cure their illusions by reading how our forefathers were advised to conduct themselves eight hundred years ago. "When called to a patient," remarks worthy Archimataeus, "commend yourself to God and to the angel who guided Tobias. On the way learn as much as possible from the messenger, so that if you discover nothing from the patient's pulse or water, you may still astonish him and gain his confidence by your knowledge of the case. On arrival ask the friends whether the patient has confessed, for if you bid him do so after the examination it will frighten him. Then be seated, take a drink, and praise the beauty of the country and the house, if they deserve it, or extol the liberality of the family. Next proceed to feel his pulse, remembering always that it may be affected by your arrival, or the patient being a miser, by his thinking of the

fee. Be in no hurry to give an opinion, for the friends will be more grateful for your judgment if they have to wait for it. Tell the patient that, with God's help, you will cure him, but inform his friends that the case is a most serious one. Look not with desire on the man's wife, daughter or handmaid, for this blinds the eyes of the physician, deprives him of the divine assistance, and disturbs the patient's mind. If according to custom, you are asked to dinner, do not hasten to take the first place, unless, as is usual for the priest and the physician, it is offered to you. Send often to inquire how the patient is, that he may see you do not neglect him for the pleasures of the table, and on leaving, express your thanks for the attention shown you, for this will please him much." After some directions for treatment comes the important question of the fee. "When the patient is nearly well, address the head of the family, or the sick man's nearest relative, thus: 'God Almighty having designed by our aid to restore him whom you asked us to visit, we pray that He will maintain his health, and that you will now give us an honorable dismissal. Should any other member of your family desire our aid, we should, in grateful remembrance of our former dealings with you, leave all else and hurry to serve him!"

Then, as now, it would seem that some patients neglected to pay their bills, so another Salernitan suggests a neat little manoeuvre whereby vengeance may be inflicted upon a non-paying patient. "Contrive that he shall take alum instead of salt with his meat; this will not fail to make him come out all over with spots."

In another handbook for quacks entitled *De Cautelis Medici* (Hints for Doctors), the physician is told: "Suppose you know nothing; say there is an obstruction of the liver. Perhaps he will reply, 'Nay, master, it is my head or legs (or other members) that trouble me.' Repeat that it comes from the liver or stomach, and especially use the word obstruction, for patients do not understand it, which is very important." "When you go to a patient, always try to do something new every day, lest they say you are good for nothing but books." How very modern it all sounds! and we venture the opinion that could they but understand the Latin in which these old books are written, our contemporary quacks, chiropractors and others, might gain many a valuable point from their nimble colleagues of the twelfth century.

A FAIR DEAL.

It is announced in the daily press that new regulations as to physical requirements under the Selective Service Act are to be issued which will apply not only to the draftees, but will be used by all army and navy examining boards. This is a highly desirable change, as it will do away with an unintentional injustice which has occurred under the present and previous regulations furnished the examiners of those young men in the draft. Certain of the physical requirements as maintained by the regular army and navy examining boards have been of a much higher standard than those in operation under the Selective Service Act as applied to registrants in the draft. As a result, it has been the repeated experience of local board and medical advisory board examiners to report for acceptance for full military service young men, who, in a highly commendable spirit of patriotism have sought entrance into the regular army or navy, only to be rejected for a defect which is not so recognized under the Selective Service Act. This has been a serious injustice to those men. Many young men of the draft age have been willing and anxious to serve their country, but naturally have felt a preference for this or that branch of service, but this freedom of choice looking to the same end has been denied them. This state of affairs is especially true as regards visual requirements, and it is to be hoped that the new regulations will serve to place on a parity in this respect all applicants, whether by voluntary enlistment or by process of the Selective Service Act.

THE SURGEON GENERAL OF THE ARMY.

In a few months Surgeon General Gorgas will reach the age of retirement. No one realizes that he is old, for in reality he is young in body as well as in mind. Great pressure will undoubtedly be brought upon the President to continue him in office, and rightly so. We can imagine no greater calamity than that the medical organization of the army should be deprived of his valuable services at this critical period in the nation's history. General Gorgas needs no biographer. His works are known to every member of our profession. As a patriotic measure let all physicians everywhere in the country urge upon the President and the Representatives and Senators of his district and state the reappointment of General Gorgas.

SOCIETIES

RHODE ISLAND MEDICAL SOCIETY.

House of Delegates.

Medical Library,
May 20, 1918.

The meeting was called to order by the President, Dr. John Champlin, at 4 p. m. There were present Drs. White, Welch, Risk, Chesebro, Richardson, Williams, Hoye, Kiley, Phillips, Howe, Manchester, Swarts, Briggs, Mathews, Keefe, Hindle, Rogers, Rose, Tefft, Sullivan and Leech.

The minutes of the previous regular and special meetings were read and accepted.

The election of officers for 1918-1919 resulted as follows:

President—Dr. Gardner T. Swarts.

First Vice-President—Dr. John M. Peters.

Second Vice-President—Dr. Jesse E. Mowry.

Secretary—Dr. J. W. Leech.

Treasurer—Dr. W. A. Risk.

Committee of Arrangements—Dr. C. F. Deacon, Dr. E. S. Cameron, Dr. W. G. Sullivan, Treasurer.

Committee on Legislation, State and National—Dr. H. W. Kimball, Dr. C. V. Chapin, Dr. F. N. Brown, President, Secretary.

Committee on Library—Dr. G. S. Mathews, Dr. H. G. Partrige, Dr. J. E. Donley.

Committee on Publication—Dr. R. Hammond, Dr. F. T. Rogers, Dr. W. A. Risk, President, Secretary.

Committee on Education, State and National—Dr. C. V. Chapin, Dr. J. H. Ladd (two years), Dr. E. A. Stone (three years), President, Secretary.

Committee on Necrology—Dr. F. G. Phillips, Dr. F. A. Cummings, Dr. H. J. Knapp.

Auditor—Dr. G. H. Crooker (term expires June, 1920).

Curator—Dr. W. G. McCaw.

The recommendation of the Council that the sum of $75 be appropriated for the Secretary for clerk hire was approved and the Treasurer instructed to pay the said sum out of the funds of the Society to the Secretary.

The Secretary presented

Annual Report of the Council, 1917-1918.

At the November meeting of the Council recommendations were made to the House of Delegates to establish the annual dues for the year 1918 at $10, and to fix the Librarian's salary at $780 per annum. The Council thoroughly canvassed the situation relative to the indebtedness of the Society and to ways and means of retiring the bonds on the Library Building and approved the Treasurer's budget for 1918, amounting to $2,700. The Treasurer's report for the fiscal year ending December 31, 1917, duly audited and found correct, was presented to and accepted by the Council at its meeting, May 20, 1918.

J. W. LEECH, M. D., *Secretary.*

Accepted and placed on file.

The Secretary presented

Annual Report of the Secretary, 1917-1918.

I beg leave to report upon the condition and activities of the Rhode Island Medical Society for 1917-1918.

The membership roll of the Society is as follows:

Active members	426
Non-Resident members	27
Honorary members	9

There have been added eight new members, and we have lost by death six active and one honorary member, as follows:

Active—Mary E. Baldwin, Newport, November 21, 1917; Wilfred W. Browne, Woonsocket, January 29, 1918; Frank E. Burdick, Providence, December 26, 1917; James L. Phillips, Providence, April 20, 1918; Philip K. Taylor, Kingston, August 22, 1917; Mary L. Farnum, Woonsocket, December 31, 1917.

Honorary—Ramon Guiteras, New York, December 13, 1917.

The regular quarterly meetings have been held in September, December, and March, the fall meeting being especially noteworthy from the clinical aspect by reason of its being held at the Rhode Island Hospital. In this connection, it may be permissible to point out an unfortunate condition which has gradually crept into the proceedings of the State Society, namely a curtailment of the purely scientific program and the importation of essayists from outside the state. This comment is not made in derogation of the quality of the programs, but to draw attention to the gradual, but steady, decline of original work among the members of the Society and to the fact that the Society is in danger of becoming a passive audience and of falling into a state of dry rot by reason of lack of incentive on the part of the members to do original work, and to quote

from the articles of our By-Laws, "to extend medical knowledge and advance medical science." In the last five years there have been twenty meetings and only nineteen papers presented by members of the Society, and of this nineteen one member has furnished three papers and two members have each presented two papers. An inevitable result, as the editor of the JOURNAL has pointed out time and again, is a dearth of material for our transactions; inasmuch as too often the essayist presents his subject from notes or extempore.

I would, therefore, suggest that the members at large feel it is their duty and their right to appear at the regular meetings to present original work and that dependence upon outside talent be reserved for special occasions.

The quarterly meetings should be of such a calibre as to attract the members who live outside of the immediate vicinity of the meeting place. Would it not be well to revert to the former custom of having an all-day session, at least once a year, so that a comprehensive program could be presented and make it worth while for the members at a distance to attend?

The exigencies of war have depleted our actual roll of members since our last annual meeting. Sixty-five of our members have enlisted in the Medical Service of our country's fighting forces and at present there are forty-four in active service. We rejoice that our membership has not as yet suffered from war casualties. The Society will be proud to record that one of its members, Lieut. Bertram H. Buxton, serving with our forces in France, has been awarded the Medal of Honor for bravery under fire.

The roll of honor, comprising members who are holding commissions in some branch of the service, is as follows:

Armington, H. H.
Barrows, A. A.
Beckett, F. H.
Butler, B. J.
Blair, F. L.
Blanchard, H. E.
Buffum, W. H.
Buffum, W. P., Jr.
Burgess, A. M.
Buxton, B. H.
Capwell, R. P.
Champlin, John
Chase, P. P.
Christie, C. S.
Corvese, A.
Danforth, M. S.
Doten, C. R.
DeWolf, H.
Dyer, W. H.
Fearney, F. A.
Ferguson, J. B.
Fisher, J. L.
Fisher, A. A.
Fitzpatrick, E. E.
Gormley, C. F.
Gardner, George W.
Hawkins, J. F.
Hamilton, James, Jr.
Hamlin, E. F.
Hammond, Roland
Hascall, F. S.
Holt, C. H.
Hussey, F. V.
Johnson, H. L.
Jordan, H. P. B.
Keefe, J. W.
Kelley, J. S.
Kenney, J. F.
Kingman, L. C.
Lenzner, S. G.
Manning, P. J.
Mathews, F. H.
Matteson, G. A.
McLaughlin, T. J.
Means, P. C.
Mendenhall, A. M.
Merchant, M. H.
Mulvey, W. A.
Noyes, I. H.
O'Connell, J. C.
O'Keefe, Walter J.
Perkins, J.
Persky, M. A.
Pitts, H. C.
Porter, L. B.
Ruggles, A. H.
Stevenson, A. W.
Sweeney, J. W.
Taggart, F. G.
Ventrone, A. C.
Thewlis, M. W.
VanBenschoten, G. W.
Weeden, A. A.
Westcott, C. S.
Wheaton, J. L.
Wilcox, R. C.

Your Secretary attended a conference of Secretaries of the State Societies in Chicago, April 30, held to consider the need of enlisting 7,000 physicians in the Army and 2,000 in the Navy at once. The need is urgent and Rhode Island must do her share. It is gratifying to note that out of a membership of 426, 65, or 15.2%, have accepted commissions. There remain, however, 258 men under the eligible age of 55 who must seriously consider the question of whether or not they should offer their services. It is therefore urged upon the Councilors and Delegates to encourage such men to apply for and accept commissions at once.

J. W. LEECH, M. D., *Secretary.*

Owing to the absence of their respective Councilors, no reports were presented for the Kent, Newport, Providence, Washington or Woonsocket District Medical Societies. Dr. George J. Howe, Councilor of the Pawtucket District Society, reported that the monthly meetings had been held and were fairly well attended, but deplored the fact that the meetings were not better attended by the younger members of the Society.

Annual Report of Standing Committees.

Committee of Arrangements: Dr. Henry J. Hoye reported that the annual meeting was held

as usual and the annual dinner at the Narragansett Hotel, at which there were 91 members and guests. Regular quarterly meetings have been held in September, December and March, at which collations have been served.

Committee on Library: Dr. George S. Mathews presented the following report:

From June 1, 1917-May 15, 1918, the Library received 568 bound volumes; reprints, 161; pamphlets, 297. Visitors at Library, 1,490.

Donations were received from Rhode Island Medical Journal, Rhode Island State Board of Health, Rhode Island Ophthalmological Society, Providence Public Library, U. S. Government, American Gastro-Enterological Association, American Clinatological and Clinical Association, American Laryngological Association, American Laryngological, Rhinological and Otological Society, American Urological Association, Association American Physicians, Conference on Hospital Social Science, New York; Institute of Medicine, Chicago; Society New York Hospital, St. Luke's Hospital, New York; Episcopal Hospital, Philadelphia; Henry Phipps Institute, Philadelphia; Massachusetts General Hospital, Peter Bent Brigham Hospital, Boston; Memorial Hospital, Pawtucket; St. Joseph's Hospital, Providence, Massachusetts State Department of Health, Department of Health, City of New York, State of Pennsylvania, Lane Medical Library, San Francisco; Medical Association, Isthmian Canal Zone; San Diego Chamber of Commerce, Carnegie Endowment for International Peace, Dr. Casey A. Wood, Chicago; Dr. Walter C. Burket, Baltimore; Dr. C. H. Mayo, Rochester; Dr. G. F. Lydston, Chicago; Dr. G. B. Peck, Providence; Estate of Dr. H. V. Weaver, New Bedford; Estate of Dr. A. E. Ham, Providence; Estate of Dr. Frank E. Burdick, Providence.

Also from the following Fellows:

H. P. Abbott,
A. A. Barrows,
C. V. Chapin,
R. Hammond,
I. D. Hasbrouck,
J. W. Leech,
W. L. Munro,
F. T. Rogers,
E. A. Stone,
G. T. Swarts,
H. Terry,
L. P. Tingley,
J. A. Webb.

Board of Trustees Library Committee: Dr. John M. Peters reported as follows:

As chairman of the Board of Trustees of the Medical Library Building, I beg to report that during the year the only repairs of any consequence that were made were those in the janitor's rooms, which were painted with oil. It would seem wise to paint the whole interior of the building as soon as the Society can afford it, as the walls need it badly in many places.

From the reports of the fuel administration, it would seem that it may be necessary to burn bituminous coal during the next winter in place of anthracite, and if this is done, some minor changes will probably have to be made in the grates.

John M. Peters, M. D.

Committee on Necrology: Dr. Frederick G. Phillips reported as follows:

As chairman of the Committee on Necrology of the Rhode Island Medical Society, I hereby submit the report for the year 1917-1918.

During the year the following members of the Rhode Island Medical Society have died:

Honorary Member—Dr. Ramon Guiteras, New York, died December 13, 1917.

Active Members—Dr. Philip K. Taylor, Kingston, R. I., died August 22, 1917; Dr. Mary E. Baldwin, Newport, R. I., died November 21, 1917; Dr. Frank E. Burdick, Providence, R. I., died December 26, 1917; Dr. Wilfred W. Browne, Woonsocket, R. I., died January 29, 1918; Dr. James L. Phillips, Providence, R. I., died April 20, 1918; Dr. Mary L. Farnum, Woonsocket, R. I., died December 31, 1917.

According to the custom, the obituaries of the deceased members will appear in the December issue of the Rhode Island Medical Journal.

Frederick G. Phillips, *Chairman.*

The Secretary presented a communication from the Secretary of the Council on Medical Education, American Medical Association, requesting the appointment of a Committee on Hospitals for the purpose of advising in connection with the collection of data relative to the availability of hospitals for the training of internes. On motion of the Secretary, the following committee was appointed: Drs. John M. Peters, F. T. Rogers, W. F. Flanagan, A. H. Miller and A. H. Harrington.

Dr. Chesebro reported for the Committee on Ways and Means that a plan relative to the retiring of the bonds of the Society had been pre-

sented to and rejected by the Council. Up to date bonds to the amount of $2,400 have been returned to the Society and cancelled, and other bonds are being held, contingent upon a more concerted action of the remaining bond holders.

Adjourned.

J. W. Leech, M. D., *Secretary.*

Council.

Medical Library,
May 20, 1918.

The meeting was called to order at 3:30 p. m. by the President, Dr. John Champlin. There were present Drs. Briggs, Swarts, Welch, Risk, White, Leech, Chesebro and Howe.

The minutes of the previous meeting were read and approved.

On motion of the Secretary, it was moved that the Council recommend to the House of Delegates that the sum of $75 per annum be appropriated for the Secretary for clerk hire, and that the Treasurer be instucted to pay said sum to the Secretary out of the funds of the Society. After being duly seconded, the motion was passed.

The annual report of the Treasurer, duly audited and found correct, was read by the Treasurer, and it was voted that it be accepted and placed on file.

J. W. Leech, M. D., *Secretary.*

DISTRICT SOCIETIES

Providence Medical Association.

June 3, 1918.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library on June 3, 1918. The meeting was called to order by the president, Dr. William F. Flanagan, at 9:02 p. m. There were present at the meeting 56 members and one guest. The records of the preceding meeting were read and approved. The president announced the death of Dr. J. L. Phillips, a member of our association. Dr. Blumer called attention to the Red Cross drive for nurses, and asked for the assistance of the members in securing the quota for Rhode Island.

The first paper of the evening, entitled "The Direct Gastro-Intestinal Investigation," was read by Dr. W. L. Chapman. The paper was discussed by Dr. J. E. Mowry, Dr. Farrell and Dr. Gerber. Dr. Chapman's paper was illustrated by lantern slides.

Dr. J. W. Leech, secretary of the R. I. Medical Society, gave a report of the recent meeting in Chicago of the secretaries of the State societies regarding the Medical Reserve Corps.

The meeting adjourned at 10:05 p. m. A collation was served.

Charles O. Cooke, *Secretary.*

Kent County District Society.

Regular meeting of the Kent County Medical Society was held in the rooms of the Nurse Association, Dr. Bryer in the chair. Minutes of the last meeting read and approved. A Red Cross Disaster Unit was formed with Dr. R. M. Smith as chairman and Dr. Ira Hasbrouck as secretary. Drs. Bryer, R. M. Smith and Clarke spoke on this subject. Dr. John G. O'Meara of Providence gave a very interesting outline of "Medical Legislation enacted during the past year." Dr. Smith explained in a few words the new methods adopted by the State for the care of drug addicts. He also discussed some of the remarks made by Dr. O'Meara in regard to the State Board of Health.

A vote of thanks was extended to Dr. O'Meara. Voted to adjourn.

Dr. James M. Bodwell, *Secretary.*

Woonsocket District Society.

The regular monthly meeting of the Woonsocket District Medical Society was held at the Woonsocket Hospital, May 23, 1918. At 3 o'clock a clinic was conducted by Dr. F. T. Lord of Boston, and at 4 o'clock Dr. Lord, who was a member of the American Red Cross Commission to Serbia, gave a very interesting lecture upon his "Experiences in Serbia." A large attendance was present, among whom were many out-of-town guests.

E. F. Hamlin, *Secretary.*

Pawtucket District Society.

The regular monthly meeting of the Pawtucket Medical Association was held at the Out-patient Building, Memorial Hospital, June 20, 1918, at 8:45 o'clock.

Address by Dr. Byron U. Richards.

C. E. Thibodeau, *Secretary.*

RHODE ISLAND MEDICAL SOCIETY

TREASURER'S REPORT

Rhode Island Medical Society in Account with W. A. Risk, Treasurer

1917		
Jan. 1.	Interest on Bonds	$366.
	Committee Workmen's Compensation Act	38.60
	Collations	148.22
	Fuel	315.
	Agent Am. Medical Association	18.
	Printing	59.25
	Safe Deposit	5.
	Insurance	15.
	Postage	42.23
	House Supplies	15.60
	Electricity	69.39
	Telephones	67.95
	City Water	9.82
	Journals	22.
	Librarian	650.
	House Repairs	162.95
	Janitor	360.
	Gas	20.36
	Interest H. G. Miller Fund	250.
		$2635.37
	Cash on Hand to Balance	145 81
		$2781.18

1917		
Jan. 1.	Balance on Hand	$ 121.98
	Dues	1900.
	Donations	427.52
	Trustees H. G. Miller Fund	250.
	Interest J. W. C. Ely Fund	74.
	Interest on Call Account	7.68
		$2781.18

Examined and found correct
March 7, 1918
D. L. Richardson
George J. Howe
Auditors

Rhode Island Medical Society in Account with W. A. Risk, Treasurer

Chase Wiggin Fund

Jan. 1. 1918.	To Loan Building Committee	$6892.21
		$6892.21

Chase Wiggin Fund

Jan. 1. 1917.	By Indebtedness Building Committee	$6892.21
		$6892.21

H. G. Miller Fund

Jan. 1. 1918.	To Loan R. I. Medical Society	$5359.10
	Paid R. I. Medical Society	250.
		$5609.10

H. G. Miller Fund

Jan. 1. 1917.	By Indebtedness R. I. Medical Society	$5359.10
	By Interest	250.
		$5609 10

J. W. C. Ely Fund

Jan. 1. 1918.	1 Bond So. California Edison Co. 5's	$ 980.
	8 Shares Mechanics Nat. Bank	480.
	Paid Treasurer R. I. Medical Society	74.
		$1534.

J. W. C. Ely Fuud

Jan. 1. 1917.	1 Bond So. California Edison Co. 5's	$ 980.
	Interest on same	50.
	8 Shares Mechanics National Bank	480.
	Interest on same	24.
		$1534.

Endowment Fund

Jan. 1. 1918.	Cash on Hand	$1447.50
	Liberty Bonds 3½ per cent	350.
		$1797.50

Endowment Fund

Jan. 1. 1917.	Cash on Hand	$ 714.71
	Donations Cash	698.65
	Liberty Bonds 3½ per cent	350.
	Interest	34.14
		$1797.50

Printing Fund

Jan. 1. 1918.	To Loan R. I. Medical Society	$1677.52
		$1677.52

Printing Fund

Jan. 1. 1917.	By Indebtedness R. I Medical Society	$1677 52
		$1677.52

Sinking Fund

Jan. 1. 1918.	Cash on Hand	$1292.23
	To Loan R. I. Medical Society	1427.67
		$2719 90

Sinking Fund

Jan. 1. 1917.	Cash on Hand	$1242.33
	Indebtedness R. I. Medical Society	1427.67
	Interest	49.90
		$2719.90

Jan. 1. 1917.	Bonded Indebtedness	$10000.
1918.	Bonded Indebtedness	8300.

Jan. 1. 1918.	Bonded Indebtedness	$10000.
	Bonds retired 1917	1700.

Examined and found correct
March 7, 1918
D. L. Richardson
George J. Howe
Auditors

HOSPITALS

RHODE ISLAND HOSPITAL.

Dr. Paul Cook has completed his duties as Fourth Assistant Superintendent, having been ordered to the Naval Hospital at Newport.

Capt. Roscoe Elliott, a former interne, is situated at the Base Hospital at Camp Sheridan, Montgomery, Ala.

Lieut. Anthony Corvese has arrived safely "somewhere in France," where he states there are many noted chateaus and gardens.

Lieut. George A. Rice has also arrived safely "somewhere in France."

Capts. Herman C. Pitts and John B. Ferguson have been ordered to Philadelphia to receive special instruction in brain surgery.

Capt. Frank M. Adams has received his commission and is awaiting orders for nose and throat work.

ST. JOSEPH'S HOSPITAL PREPAREDNESS FUND.

St. Joseph's Hospital has recently conducted a very successful campaign in the state to raise a fund of $200,000 to equip the hospital for the treatment of wounded and crippled soldiers as they are received from overseas. This work will be undertaken at the request of the Government. From the fund raised suitable equipment will be provided, solaria will be built, and the hospital put into the best condition to meet the increased demands which it is expected will be put upon it.

HONOR ROLL.

Capt. Frank M. Adams, M. R. C., U. S. A.
Lieut. Vernon E. Babington, M. R. C., U. S. A.
Lieut. Cornelius Barry, M. R. C., U. S. A.
Lieut. James H. Bartley, Jr., M. R. C., U. S. A.
Lieut. Thomas F. Baxter, M. R. C., U. S. A.
Lieut. Joseph L. Belliotti, M. R. C., U. S. A.
Lieut. Frederick N. Bigelow, M. R. C., U. S. A.
Lieut. Robert H. Breslin, M. R. C., U. S. A.
Lieut. Ernest A. Burrows, M. R. C., U. S. A.
Lieut. Charles M. Collins, M. R. C., U. S. A.
Capt. William B. Cutts, M. R. C., U. S. A.
Lieut. Thomas V. Daley, M. R. C., U. S. A.
Lieut. Harold DeWolf, M. R. C., U. S. A.
Lieut. Fred P. Drowne, M. R. C., U. S. A.
Capt. William G. Dwinell, M. R. C., U. S. A.
Lieut. Charles A. Farrell, M. R. C., U. S. A.
Lieut. Thomas S. Flynn, M. R. C., U. S. A.
Lieut. Daniel S. Harrop, M. R. C., U. S. A.
Capt. Charles E. Hawkes, M. R. C., U. S. A.
Lieut. John L. Healy, M. R. C., U. S. A.
Lieut. John S. Hodgson, M. R. C., U. S. A.
Lieut. Rollo Hutchinson, M. R. C., U. S. A.
Lieut. John Paul Jones, M. R. C., U. S. A.
Lieut. Royal K. Joslin, M. R. C., U. S. A.
Capt. William McDonald, Jr., M. R. C., U. S. A.
Lieut. Edward Merritt, M. R. C., U. S. A.
Lieut. Richard Metcalf, M. R. C., U. S. A.
Lieut. Edward W. Mulligan, M. R. C., U. S. A.
Capt. Walter C. Rocheleau, M. R. C., U. S. A.

A MILITARY MEDICAL SURVEY.

The first step in the campaign to secure additional Medical Reserve Officers is to ascertain the conditions in the various parts of the country, i. e., to know the proportion of physicians to the population, the number of physicians in a community who are available so far as age is concerned, the number who are already in the service, and the needs of the civilian population. When these and similar facts are known, there will be dependable information available for systematic and logical procedure in securing the number of physicians needed to supply the demand. Such a survey is in course of preparation by the Association; it will give the number of physicians in every county and large city in each state, the number of physicians under 55 and under 45 years of age, and the number and names of those who are now commissioned. It was hoped that it would be ready for publication before this time. However, a survey such as is in preparation is a difficult and tedious task; it requires not only the compilation of a vast amount of data, but also much checking and verification. This survey will appear in the *Journal* for May 25 or June 1. It will show what each county has done, and will undoubtedly reveal that many communities have supplied more than their quota, while many have not done their share. Meanwhile, it is obviously unnecessary for any one who desires to volunteer for the Medical Reserve Corps to await for the publication of this survey. Application blanks, lists of examining boards and information will be sent on request.—*Jour. A. M. A.*, May 11, 1918.

THE RHODE ISLAND MEDICAL JOURNAL

The Official Organ of the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

VOLUME II
NUMBER 8 } Whole No. 122 PROVIDENCE, R. I., AUGUST, 1918 PER YEAR $2.00
SINGLE COPY, 25 CENTS

ORIGINAL ARTICLES

MEDICAL ACTIVITIES OF THE NAVY.*

By JOHN CHALMERS DA COSTA,
Surgeon, U. S. N. R. F.

I am making what to me is a new sort of address, hence, in the words of Irvin Cobb, I shall call my address a mutual endurance trial. I will not be statistical. Perhaps I will not be even consecutive. I am here under orders from the Surgeon General of the United States Navy to address this Society. It is a privilege to be here. It is an honor to represent the medical department of the Navy in this distinguished gathering. I aver it is a high personal honor to represent the Navy in any way, in any place, and at any time.

I am a mere amateur. A landsman in temporarily and unheroic aqueous association. One who has been permitted to serve the Navy for a time during a great national crisis and is to return eventually to his normal habitat—the civilian profession. One who has begun to follow the sea but as yet has not caught up with it. As an amateur and a landsman I can speak freely of all those things I feel without a possibility of seeming, from personal bias, to exaggerate the importance, the interest, the nobility, the romance of a sailor's life. I can say what I think without creating in your minds the feeling that the eminent public character created in the mind of an ancient colored auditor. When the speech was over the old colored man tottered out and said to some waiting friends who had been unable to get in—"He suttinly do praise hisself most high." I intend to praise the Navy, but not myself, "most high."

The Navy is the glory of American history—the champion of American liberty—the steel wall of American security—the treasure ship of American romance.

*Read before the Rhode Island Medical Society, June 6, 1918

To speak of the Navy brings before us a record lustrous with achievement, brilliant with the great deeds of famous seamen and the trials and triumphs of noble patriots.

The eye of the mind sees that stout and gallant seaman, an Irishman by birth, Captain John Barry, he who was the first regularly commissioned officer of the first regularly commissioned boat of the United Colonies. John Paul Jones, who, as a lieutenant on the Alfred, as she lay at Walnut street wharf, Philadelphia, unfurled the first flag raised on an American warship, the flag of 13 stripes with the English Union Jack in the field; who, on the Ranger in Quiberon Bay, received the first salute given the stars and stripes in Europe—who, as commander of the Bonhomme Richard, fought the Serapis, grappled to her, hot gun lip kissing gun, who made answer to a demand for surrender by saying, "I have not yet begun to fight," led his crew from his own sinking ship on board the vessel of the enemy, took her by pike and cutlass, and sailed off in her with the stars and stripes at her mast head. The eye of the mind sees Truxton of the Constellation; Dale, the Commodore of the Essex, the Philadelphia and the United States; Bainbridge of the Constitution, who took the Java; David Porter of the Essex who beat the Alert; Stephen Decatur, that great seaman and splendid gentleman, the son of a native of this state. Decatur, who, while on the 44-gun frigate United States, beat and captured the Macedonia, who, while at Norfolk, proposed the famous toast, which should be the pole star of the naval officer: "Our country! In her intercourse with foreign nations may she always be in the right; but our country, right or wrong," and who perished miserably in an unfortunate duel, the result of the wicked gossip of lying tongues. Charles Stewart of the Constitution, who took the Cyane and Levant; Isaac Hull of the Constitution, who captured the Guerriere; Captain James Lawrence of the Hornet, who captured the Peacock, and who, struck down mortally wounded as the

Chesapeake was being battered by the Shannon, said, with his dying breath, "Never give up the ship;" and Commodore Oliver Hazard Perry, who won the Battle of Lake Erie and thus destroyed foreign supremacy in the Northwestern Territory, and who wrote to General William Henry Harrison, "We have met the enemy and they are ours."

Long after their time Dr. Oliver Wendell Holmes wrote of those great sailors of the Revolution and of the War of 1812:

"Scarce one tall frigate walks the sea,
Or skirts the safer shores.
Of all that bore to victory,
Our stout old commodores.
Hull—Bainbridge—Porter—where are they?
The answering billows roll.
Still bright in memory's sunset ray,
God rest each gallant soul."

The eye of the mind sees Commodore Stockton in 1847 leading a land force of sailors, defeating the Mexicans at Los Angeles and seizing California. Commodore Mathew Perry in 1853, opening Japan to foreign commerce. Captain Tatnall in 1859, throwing law, diplomacy and custom to the winds, going to the rescue of the French and English, who were almost bested at the Peiho Forts, and declaring as he went: "Blood is thicker than water." Maury making those deep sea soundings which altered the world's scientific conceptions and which were set forth in his famous book, "The Physical Geography of the Seas." De Haven searching the Arctic wastes for the lost English navigator, Sir John Franklin. Wilkes exploring the Southern seas and the Antarctic in the cause of science and finding a continent which still bears his name. Rowan, Foote, Worden, Dupont, Rodgers, Dahlgren, Cushing, another Porter, and the great Admiral Farragut, who went into the fight at Mobile Bay saying, "Damn the torpedoes! Four bells! Captain Drayton, go ahead, Jouett, full speed," and the Hartford led the way. Admiral George Dewey, who, on May 1, 1898, destroyed the Spanish fleet, saying, "Gridley, you may fire when ready." Gridley fired, iron hail wrote the message of destiny in Manila Bay, and the western border of the United States was moved into the very portals of the distant sunset.

So down to our own times proud traditions have accumulated and are now being born daily. History is being made every hour. It's a far cry from oak to iron, from canvas to steam, from the smooth bore carronade to the 14-inch rifle, from the frigate to the superdreadnaught. At the end of the War of the Revolution the Navy was practically abolished. Even in times many of us can remember (1881) there were 13 wooden steamships, so-called first raters, 4 of which were on the stocks and were never launched; 20 second raters, 19 of which were of wood, and hardly one of which was in seaworthy condition; 27 third raters, 23 of which were of wood, and nine monitors which were relics of the Civil War. Nearly all the guns were muzzle loaders and most of the largest were 9-inch smooth bores. In 1887 the Secretary of the Navy said, "There is now no Navy." (The *Americana* article upon "Navy of the United States.") Yet the high level of the personnel never wavered. Officers, enlisted men, discipline, courage and patriotism are and have ever been as of old. The nature of the men and the discipline were the same in our little revolutionary Navy as in the majestic war machine which is the Navy of to-day.

Secretary Daniels says: "The Navy as a fighting agency, as the embodiment of power, as the protector of the country from aggression, is to-day the pride and the reliance of America. But that Navy can speak for itself, is speaking for itself through its more than 350,000 men and more than 1000 ships now in active service, and will speak with greater emphasis when the hour comes for which all other hours have been but preparation." (*National Geographic Magazine,* April, 1918.)

A few days ago Admiral Gleaves stated that the Navy is now composed of 19,000 officers and more than 400,000 men. (*Philadelphia Press,* June 3, 1918.) It is four times greater in size than it was little over a year ago.

The present appropriation bill calls for almost one billion six hundred million dollars.

Through all its years the officers and men have always trained to the highest point to meet the supreme emergency. To some the glorious chance will never come. Those to whom it does come will meet it joyfully, rise to it instantly, face it heroically, and each will do his part ably, intelligently, quickly and calmly, and will feel and show that no sacrifice is too great when his country needs it or expects it.

The Navy is a great career, a fine career, a splendid career. Broad enough for any man's ambition.

The enlisted men are educated, intelligent, healthy and clean. The line officers are highly trained sailors and fighting men. Macaulay, in speaking of the commanders of the Navy of Charles II, said: "There were gentlemen and there were seamen in the Navy of Charles the Second. But the seamen were not gentlemen, and the gentlemen were not seamen." When we speak of the commanders of our Navy we say, the sailors are gentlemen and the gentlemen are sailors.

In peace the Navy is always busy throughout the world and is ever occupied in preparation. At the present time it is intensely and heroically busy. One hundred and fifty vessels and 40,000 men represent the nation on the war front across the sea. (Gleaves Ibid). When this grim war shall be over it will be learned that every boat has participated in dramas as tremendous as those Kipling has written or Conan Doyle has told. Every boat! From the destroyer, that fierce, swift watch dog of the deep, which haunts with ceaseless vigilance the lonely, mist clad, submarine infested, North Atlantic, to the great battleship,—which—

"From a mass of metal red
Human hands in many days
Bring to being, grim and dread,
Lord of All the Waterways.
Grey and solemn on the wave,
Vast of beam, immense of length;
Coldly scorning death and grave—
Citadel of monstrous strength."
(—*Walter Wood.*)

The Navy is ever increasing. With every increase of the Navy the Medical Corps wants more men. The Council of National Defense asked for 1,000 doctors and the Navy got them. With every new ship and new batch of seamen more doctors will be required. The Navy will want men for the regular service, young men who will enter it for a career and become part of it for life. It will want men for the N. R. F., men who will enter for the emergency and will place their medical talents and experience at the service of the Government.

To all men considering applying for the regular service or the R. F., I want to bring home the conviction that the Navy is a service of the greatest interest, usefulness and honor. In this world so rich in the commonplace, the Navy still holds romance. It speaks to us of the sea, its stories and its mysteries, of

"Sails of silk and ropes of sendal,
Such as gleam through ancient lore.
And the singing of the sailors
And the answers from the shore."

Which one of us as a boy has failed to be lured by the charm and mystery of the sea? All real boys feel it. The fundamentals of a nature may be masked, held in check, baffled, spurned, they are never destroyed. The boy is father to the man. All of us to-day feel within us the stirrings of that old romance:

"Sailor songs to sailor tunes,
Storm and adventure, heat and cold.
Schooners and islands and maroons,
And buccaneers and buried gold."

I have said something of the Navy in general. I must now speak of the naval surgeon in particular. He is, I am glad to say, always addressed as Doctor. That he is always a doctor marks him out in a certain definite way. He has rank, he has the uniform of his rank, he has the salary of his rank, but he is always a doctor. That's how he is addressed, be he the Surgeon General (who ranks an admiral) or the most recently appointed assistant surgeon (who ranks a lieutenant of the junior grade). All are doctors. I like this plan. I would be sorry were it altered. Surely no title could be more honorable or more respected. The very fact that the naval surgeon bears it and wears it secures for him a peculiar and a gratifying position. It helps to make him the friend, the adviser, the confidant, the counsellor of his shipmates, high and low.

The surgeon's rank is every whit as good as the rank of the line officer. There is no discrimination. His position on a boat or in a station is an enviable one, a position which secures liking and respect, unless he sacrifices those things by vanity, aloofness, meddling or temperamental maladjustments. There is no caste. Certain men are designated to give or-

ders; certain men must receive orders. Years and years ago there were disagreements and bitter ones between the medical men and the line officers. There were quarrels, misunderstandings and sometimes inveterate personal dislikes. For instance, and old and retired medical officer told me that when he was a young man the fleet surgeon was involved in a fierce quarrel with the fleet commander as to the prerogatives of medical officers. The fleet was in harbor at a South American port. The American Consul had a pretty daughter. It seems to be a special ordination of Providence that consuls should have daughters of that sort. I fancy the genuine American girl looks especially good to an American sailor who has been long in foreign parts. At any rate she was a pretty girl. That pretty girl had a favorite dog. The dog broke its leg. The girl was terribly grieved and in spite of parental protests determined to go to the boat and ask her friend, the Fleet Surgeon, to come on shore and treat the animal. She went out to the boat. The Fleet Surgeon and several officers were on deck. The old surgeon was still flushed and angry from his recent red-hot controversy. The girl told him the story and begged him to forgive her for asking him to attend a dog. The surgeon said in the hearing of many officers: "Of course, I'll see the dog. Don't apologize. Why shouldn't I attend a dog? Haven't I been attending line officers of the Navy all my life?" Years and years ago harsh feelings did crop up at times, but such things are dead now, dead as the forgotten dynasties of Egypt. A number of years ago the system that made for disagreement vanished as suddenly and completely as an automobile which had just run over a boy. The position of a medical officer in the Navy is one of proper dignity and high authority. As Surgeon William H. Bell says (Keen's Surgery, Vol. VI), "The Medical Department is now recognized as a coördinate and coöperative (not subordinate) branch of the service."

In this connection we might well use a word employed by Vice-Admiral Sims to set forth the real relation of the United States to the Allies. The word is "consolidation." In the Navy—the line, the pay corps, the medical corps, the engineering corps are consolidated. What is demanded and what exists is not so much cooperation. It is *team work*. Even the most profound stupidity, if unaided by whiskey, would fail to suggest weakening or dissolution of this most valuable consolidation.

The duties of a surgeon in the Navy vary in many ways and in some ways very widely from the duties of a civil practioner. In civil practice the individual patient is the sole object. In the Navy military necessity must govern absolutely and there will be times when the good of the mass must be balanced against the good of the individual. The supreme and imperative end to which the Navy looks is battle. For battle the Navy must be ever ready. For battle the men of the fighting force must be in the very pink of condition, fit at a moment's notice for any emergency. There must also be ready an ample supply of all materials that may be needed, and the materials like the men must be of the best. Among the materials there must be nothing that has deteriorated, nothing that has spoiled, nothing that has corroded. Every knife must be keen. Every dressing must be sterile. Among the men there must be none who is hard of hearing, maimed of limb, dull of mind or bleared of vision. The poor eyesight of a gunner might protect an enemy better than that foe's own steel turrets. Deafness, by preventing the understanding of an order, might be responsible for the destruction of a ship. Slowness of movement on the part of a boat's crew might lose a landing party. An epidemic in a fleet might mean the loss of a battle or even of a war. Constant inspections and endless training are absolutely necessary to secure good results.

In battle the surgeon's first aim is to give early treatment to the wounded, especially to those who may recover, and most particularly to those who may recover rapidly and soon take their places again with the fighting men. Fighting men gain in coolness, courage, stamina, effort and resolve when they know that the wounded will be cared for ably, kindly and promptly.

The second aim in battle is to evacuate the wounded as quickly and as easily as possible. The ship, if able to proceed, is thus freed for further military activities of fight or pursuit, and the wounded are taken to a point where treatment can be carried out at leisure with proper help and facilities.

In a naval hospital the disease or injury is treated exactly as it would be treated in the best

civil hospital, but the surgeon in charge of a naval hospital must know and do many things which never have to be considered by the civil surgeon. In a civil hospital a patient goes out as soon as he is able to care for himself or as soon as he can be cared for outside. In a naval hospital a patient must remain until able to return to work. The day the seaman returns to his ship he begins to do his full work. The naval surgeon must attend to all sorts of things from giving an orderly a liberty pass to amputating a leg, from inspecting supplies to supervising the construction of a new wing to the building. He has the care of all property. He must see to all papers and records. These records seem hopelessly complicated to a novice but the complication is only apparent. It serves a highly valuable purpose and because of the records it is, at any time, possible to find out where a man is and all about him, yet that man is but one among more than 400,000.

The surgeon must make out various elaborate reports and must make them out in exact accordance with ordained form. He must endorse applications and complaints; enforce discipline, teach and train various subordinates, do duty on boards of examination and survey, sit on courts-martial, take up special problems of sanitation, hygiene and various other things. To do these things in proper form (and the Navy will have them done no other way) the surgeon must have read, studied, digested, and mastered all the Naval Regulations and all the Naval Instructions. I say to you that no surgeon, fresh from civil life and devoid of naval training, is fit to be in charge of a naval hospital or a naval training camp or in medical charge of a ship. Of course he could make diagnoses, prescribe medicines, and perform operations, but were he to take full charge of that hospital, camp or ship, he would plunge everything into hopeless chaos. Chaos inevitably means inefficiency and unpreparedness. The essences of the Navy are efficiency and preparedness. Unpreparedness might mean frightful disaster. A trained naval man must, of necessity, be in charge. If you should ever hear anyone criticize the Department because officers of the R. F. do not receive rank above that of Surgeon, take it from me, as one of the R. F., it is not the result of jealous or unjust discrimination. Officers are not fit to receive higher rank until specially trained in all the technicalities of the duty. To give members of the R. F. advanced rank simply because of prominence in civil practice would be a bitter wrong to the service. Were a man to clamor for such advancement he would give the best evidence of unfitness for it. I do not believe that the members of the R. F. expect it or ask for it.

The naval surgeon is a specialist—not a narrow specialist but a peculiarly broad one—a specialist who must study many specialties and who must receive a rigid and peculiar training. Surgeon General Braisted says (N. M. S. 127,404, February 15, 1917): "It must be remembered, therefore, that the medical officer of the Navy is a specialist; that Navy medical work is a special branch of medical and sanitary practice and must be viewed as one among the many other special fields of medicine. It, however, differs so essentially from civil practice that this training must be of a character peculiar to the problems of the naval service."

The well trained naval surgeon knows far more of various branches of medicine than does the average civil specialist. His duties require him to be a sanitarian, hygienist, surgeon, practitioner of physic, bacteriologist and statistician. "In conjunction with his duties the medical officer may also perfect himself in some branch of medicine for which he has a particular bent or liking. He may specialize as a hygienist, a specialist in tropical medicine, eye, ear, etc." (Surgeon General Braisted, Ibid). When I talk to trained naval surgeons I am frequently ashamed of the narrowness of my own technical reading. I would make a fine mess of cultivating, staining and identifying bacteria—of demonstrating by laboratory methods certain tropical maladies and blood diseases—of planning a hospital for contagious diseases—of taking over the sanitation of a town. A trained naval surgeon could do one or all of those things as a matter of course.

The high repute of professional naval surgeons is shown by the fact that four recent Presidents of the United States, the present incumbent being of the number, chose naval surgeons for family physicians.

The able and distinguished Surgeon General, Doctor Braisted, in his admirable brochure on "The Navy as a Special Field for Medical Work," a pamphlet I advise all of you to send

for, (N. M. S. 127,404, February 15, 1917), speaks as follows:

"The Navy consists of its ships or floating force, its navy yards for the building, repair, and upkeep of these ships, its naval training stations for the training of men to man these ships and yards, its naval hospitals for the treatment of the sick, etc. Each one of these units is a community in itself, with one department interdependent upon another. A ship with its complement of several hundred men is similar to a small town, having consideration for its water and food supply, its sewage disposal, lighting of the passageways and living apartments, heating and ventilation of its living quarters, protection against epidemic diseases, maintenance of the general health of the community, general hygienic and sanitary matters; in fact, almost every question that arises in a small civilian community. On board this ship there are officials who represent in a similar way the various officials of a town. It can be readily seen, therefore, that the medical officer represents not only the board of health but also the sanitary inspector and the medical adviser and family physician. In other words, he looks out for the general hygienic and sanitary matters and treats all the sick. His is a combined duty. He represents all the medical talent available to any community. However, as this community in which he is located moves about over the globe from one region to another, he first must deal with conditions of a northern climate and again with the conditions of a tropical climate. He must at all times maintain the health of the personnel in the highest state of effectiveness. In order to do this the medical officer must keep himself thoroughly informed of advances upon all medical matters and general sanitation; he must be familiar with the latest information relative to the cause and prevention of disease, modern means of lighting and ventilation, special treatments of special diseases, and be ready at any time to undertake to the best of his ability any question which may be brought to his attention. It is therefore necessary that he do much reading of medical publications, and that he must not lag behind in the rapid advances of medical knowledge."

You observe, gentlemen, that the naval surgeon does not and must not stagnate. He reads, studies and investigates. He must else he would have disaster on his ship, in his camp or in his hospital. There are few men seen in the sick bay of a war ship. That doesn't mean the surgeon is an idle man. He is a very busy man. By keeping busy he keeps the sick bay empty. Were he lazy it would be full. Repeated rigid examinations for promotion force even the mentally indolent surgeon to study in order to keep abreast of the times. Literary effort is encouraged by the publication in that admirable journal, the U. S. Naval Medical Bulletin, of papers and reports. It is a very responsible thing to have charge of the health of a thousand men in the narrow quarters of a battleship or of several thousand in a transport. The Navy cannot afford to let any man have charge unless he is expert in all problems of fumigation, isolation, ventilation and sanitation and contagious diseases. Think of the immense responsibility of one who has charge of the health of a great fleet or of a huge training camp.

An epidemic of scarlatina, variola, typhoid or cerebro-spinal meningitis might put half or two-thirds of the boats of a fleet out of service and so might cause the loss of a battle or even a war. Preventive medicine is *the* great thing. It must be a source of just pride to our able Surgeon General, Doctor Braisted, and to all his efficient assistants, that the health of the fleet is as good or even better than in times of peace.

The naval surgeon is no carpet knight. He cannot be scoffed at on such a ground. There is no Red Cross on a battle ship. The surgeon is in just as much danger as the combatants. During the first three years of the war fifty-six British naval surgeons were killed in action or went down with their ships (H. C. Ferraby in Philadelphia Press, May 19, 1918). In a fight or an accident the surgeon must look out for and stay with the wounded as the hospital ship will be far in the rear. To appreciate the trials, perils and difficulties of the surgeon when in action read of the work of the naval surgeons in the battle of Jutland, how operating rooms were destroyed, how hard it was to move the wounded to the operating room and from it to make room for others, how electric light systems were annihilated, and how on one boat cases were dressed when water was two feet deep on the floor of the operating room. In the British attack on Zeebrugge one surgeon worked over the wounded,

standing in gasoline over his ankles. By mere good fortune the treacherous fluid was not set alight.

After Jutland, Admiral Beatty wrote as follows: "Exceptional skill was displayed by the medical officers of the fleet. They performed operations and tended the wounded under conditions of extreme difficulty. In some cases their staff was seriously depleted by casualties and the inevitable lack of such essentials as light, hot water, etc., in ships damaged by shell fire, tried their skill, resource, and physical endurance to the utmost." (Ferraby, Ibid.)

So far our Navy has had no great sea battle. But, to a certainty, its day will come. Look forward to it with perfect confidence. It will be worthy of its record and its reputation, of the cause and of the country.

Medical Inspector Murphy, U. S. N., gave to the Council of National Defense an outline of the activities of the Navy for the first year of the war. He quoted the report of the Sub-Committee of the House Naval Committee, made after a careful investigation of the Navy. The following are the views expressed by the Committee regarding the Medical Department:

"The first battle of the war, that against disease, was fought and won by the Medical Department of the Navy, under Rear Admiral William Braisted.

"After diplomatic relations with Germany were broken in February, 1917, recruits, we find, streamed into the service in increasing numbers, and in April there was grave danger that the overwhelming influx of volunteers would overtax all training stations and receiving-ship facilities and bring disaster to the Navy at the very beginning of the war by the introduction and spread of epidemic diseases, which unfortunately were widely prevalent throughout the country at that time.

"The Navy in this early critical period was fortunate in having as its Surgeon General a far-seeing man, of the clearest judgment, who had the confidence of the medical profession at large and who inspired confidence and loyalty in his own corps. Admiral Braisted, possessed of unusual ability as an organizer and administrator and an intimate knowledge of the needs of the service, was eminently fitted to direct the activities of the Medical Department. Patient and optimistic, and with a quiet force of character which accomplished results, he began at once, without delaying even for appropriations, to prepare for eventualities which he clearly foresaw. Except for an occasional outbreak of those diseases which commonly occur among recruits, the health of the Navy has been quite as good as in times of peace. In spite of all the difficulties in the way of rapid expansion, and the sudden necessity for the training of new medical personnel and Hospital Corpsmen, the health of the force afloat has been even better than in peace times.

"The Medical Department facilities have undergone tremendous development everywhere. The excellent and finely equipped base hospitals which were built before the war, largely through foresight on the part of the Surgeon General, have been greatly expanded with a speed which could not have been attained if the organization of the Medical Department as a whole had not been carefully thought out long before war came and plans perfected for the immediate enlargement of base hospitals and the construction of emergency hospitals of the finest type wherever necessary. The total bed capacity of naval hospitals was thus increased in a period of a few months from 3,800 to more than 15,000 beds. The mothers of the countrty can rest assured that in these hospitals their sons will receive excellent care and nursing and the most skilled treatment that modern medical and surgical knowledge permits. The naval hospitals at Great Lakes, Ill., and Norfolk, Va., are already two of the largest hospitals in the United States, and with the authorized additions to the Norfolk hospital it will be one of the greatest institutions of its type in the world. The Navy Nurse Corps, comprising women of the highest type in the nursing profession, has been increased to more than 700.

"On board ship and at naval stations the health of the men is protected by all the safeguards known to preventive medicine. The Hospital Corps, upon which falls exclusively the nursing of the sick and wounded outside of hospitals, has been increased from 1,500 to nearly 9,000.

"Hospital Corps training schools have been established in connection with the training stations at San Francisco, Great Lakes, Newport (R. I.) and Hampton Roads. In these schools young men of good character and aptitude are intensively trained for their duties at sea.

"Foreseeing that the hospital ship, now under construction, and which the Surgeon General had long asked for, would not be completed in time

to meet the war needs of the service, two large liners were secured and converted into hospital ships to supplement the work of the hospital ship *Solace*. To assist the Army in bringing back the sick and wounded from abroad, Admiral Braisted arranged that the transports operated by the Navy should have ample Medical Department facilities and necessary equipment, and so far as naval facilities exist has assumed responsibility for the medical and surgical care of all Army sick and wounded who may be transported home on naval vessels from Europe.

"For the care of our naval forces in England, France, and European waters three base hospitals are already in operation abroad.

"In expanding the Medical Department to meet the present and future needs of the Navy, we were glad to find that the needs of the increasing numbers of industrial workers and other civil employees in the large manufacturing plants in navy yards had not been overlooked. The peacetime humanitarian work is also being continued in connection with Haiti, Santo Domingo, Virgin Islands, Samoa, and Guam, involving a population of over 2,000,000 people.

"It may well be said that the reason for this successful record is to be found in the bureau's preparedness, due to foresight and co-operation."

Doctor Murphy says—"Doctor Braisted feels, I know personally, that the very complimentary expressions, which the Committee were kind enough to employ about him are not wholly self deserved, but should be most fitly applied to his personal staff, including the civilian employees of the Bureau, to the hundreds of his loyal medical officers, both regular and reserve, ashore and afloat, and to the nurses and hospital corpsmen whose perseverance, whose patience, whose intelligence and whose industry so largely contributed to produce the favorable results, which seemingly have been accomplished.

Doctor Murphy said, in closing: "I would like to say that with the commencement of the second year of war, Doctor Braisted is making every effort to foresee and provide for the future. The expansion of Medical Department facilities, touched upon in the committee report mentioned, is still going on. All the hospitals are being prepared by increase of beds for the expected enlargement of the Navy, its increased activities, and for the winter to come. These activities, it is expected, will double our responsibilities for the coming year, and we hope at the end of the second year of war that we of the Naval Medical Corps may be guided, as before, by the Surgeon General to as happy an ending as seems to have been the case for the year just passed."

In regard to the wonderful health of the Navy in war time Vice-Admiral Sims, the able and gallant commander of our over-seas fleets, sends the following message to the fathers and mothers of his sailors. He says of their sons: "Of course they must take sailors' chances. That is the sea, and that is especially the sea in war time. But the great majority will escape war's hazards, and will be kept in fine health and fine morals, and will be trained to be real men. If they lose their lives they will lose them in a noble cause, and the total loss of life in the American Navy during the Great War is likely to be far less than the aggregate of years which will be added by its training to the vast majority whose lives will not be lost." (Philadelphia Press, May 26, 1918.)

We are all proud of our Navy. We doctors are all proud of the Medical Department of the Navy. The Navy is doing splendid things—is doing them quietly, unostentatiously, heroically and with marvellous efficiency. It may well be the deciding factor in this great war. Were I so fortunate as to have a son I would wish for him no finer or more useful career than is offered by the Medical Corps of the Navy.

A man who makes it a career can't become rich. That's a good thing. What is a more worthless ambition than to become merely rich. To be nothing but an idle rich man, to occupy the same relation toward mankind that a cat does to a cream jug or a rat to a corn crib and to have no interests in life except the daily performances of a broker, a cook, a bar keeper and a golf club, is not a high ideal. Isn't it better, far better, to be secure of a modest competence, to be a *real* man, to be a useful man, to serve the country in peace and in war, to be an integral part of that great and beneficent organization—the Navy? The Navy! which did so much to secure our liberties. The Navy! which now defends and propagates our freedom—that freedom—clear and crimeless—which has made of us what we are and ought to be—the radiant morning star which is looked to for hope and guidance by all of the democratic longings of all of the nations of the world.

THE AMERICAN FLAG.

Hon. S. H. Davis,
Westerly, R. I.

As I approached your attractive new building this afternoon, I saw floating from its staff the most beautiful banner that was ever unfurled over any building, state or country. The beauty of the banner consists not in its color or design, but in the things for which it stands. Neither can the value of the banner be estimated in the cost of its material, the fineness of its texture or the skill with which it was wrought, but in the heart-aches, the fears, the tears that have been shed for the lives lost that the principles for which that flag stands may live. So it is that the American Flag which we honor today has become more beautiful with the passing years. It was a thing of beauty when it first flew over the thirteen original colonies. It has become more beautiful when in 1814 Robert Scott wrote from his prison cell, "And the rockets red glare gave proof through the night that our flag was still there." It had added still greater beauty in 1865 when it was replaced over Fort Sumter.

A greater glory had been added to the American flag in 1878, but the most beautiful thing these eyes ever beheld was the flag of my country in the distant land. It is a symbol of the power, the glory and the strength of 50,000,000 Americans. Nearly forty years have passed since those memorable works. Now 100,000,000 hearts leap at the sight of Old Glory and there are thousands nestled beneath its folds in the isles of the sea, while untold numbers of twenty-two nations of the earth are looking to the American Flag today for deliverance from the most terrible, wicked, and bloody war the world has ever seen. And is it any wonder that the Premier said "when the American flag is unfurled on our battlefield, it will be more than furnishing military aid come to our assistance."

Is it not because the American flag has in it more of a spirit of liberty and freedom than any other that the nations of the earth are looking to it in their time of need?

Cyrus, Alexander, Napoleon, and Caesar as well, together with the Kaiser, have in turn tried to rule the world by naval and military power, but the determination of the Kaiser, like that of Alexander and Napoleon, will be broken on the Alpine peaks of his ambition, for some day a million American mothers' sons will carry Old Glory through the streets of Berlin.

All those who have gone, are going, and will go, the Y. M. C. A., the Red Cross, the professions are going. To some of us whose heads are too white, who are too old for military service in the field, or because of our business relations are not going. But some of us are saying "I cannot afford to do it." What shall we say of our glorious boys giving their lives on the sea and in the trenches? Are they giving just what they can afford, or are they giving to the limit, to the last drop of blood? What shall we say to the mothers, and the little kiddies in the shell-torn towns of France, homeless, husbandless, fatherless, hungry, ragged, and yet are they giving what they can afford? And they are not giving one bit more than your mother, wife and the kiddies would be giving had it been that the gardens of America instead of France were next to the Wild Boar of Europe.

Men of the medical profession in times of peace have added more to the glory of the American Flag than you know, and in this time of national stress and world stress no class of men are so much demanded and needed in the support of the flag of the country as are you today. Our sorely pressed allies need you, our boys need you.

Information came to me yesterday which I fear is all too true, that the most splendid specimens of American manhood being taken by the Germans are being castrated. Men, if that is true, this war should not end, the American Flag should not be furled as a war flag until every man in Germany shall be castrated, until his seed has banished from the earth.

Our boys cannot stand against shot and shell and they need not, when American doctors can go, should go, and will go to their rescue. One Red Cross hospital in France a year ago treated 46,000 for gas gangrene. Every one of these cases would have been fatal without treatment, and there was less than 400 out of the 46,000 lost.

For the glory of the flag, every man here should do his work in the next year.

Whether the flag was first conceived in the heart of Washington or in the fingers of Betsy Ross will never be decided.

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

ROLAND HAMMOND, M.D., *Editor*
249 Thayer Street, Providence, R. I.

J. F. HAWKINS, M.D.
Business Manager
114 Westminster Street
Providence, R. I.

ALEX M. BURGESS, M.D.
JOHN E. DONLEY, M.D.
J. W. LEECH, M.D.
F. T. ROGERS, M.D.
} *Associate Editors*

Committee on Publication
ROLAND HAMMOND, M.D., *Chairman*
F. T. ROGERS, M.D.
W. A. RISK, M.D.
GARDNER T. SWARTS, M.D.
J W. LEECH, M.D.

Editorial Correspondence, Books for Review and Exchanges should be addressed to the Editor; Advertising Correspondence to the Business Manager.

Advertising matter must be received by the 15th of the month preceding date of issue.

Advertising rates furnished upon application, to the business manager, J. F. Hawkins, M.D., 114 Westminster Street, Providence, R. I.

SUBSCRIPTION PRICE, $2.00 PER ANNUM. SINGLE COPIES, 25 CENTS.
Entered at Providence, R. I. Post Office as Second-class Matter.

RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

GARDNER T. SWARTS	*President*	Providence
JOHN M. PETERS	*1st Vice-President*	Providence
JESSE E. MOWRY	*2d Vice-President*	Providence
JAMES W. LEECH	*Secretary*	Providence
W. A. RISK	*Treasurer*	Providence

DISTRICT SOCIETIES

KENT
Meets the second Thursday in each month

H. BARTON BRYER	*President*	Natick
JAMES M. BODWELL	*Secretary*	Phenix

NEWPORT
Meets the third Thursday in each month

EDWARD V. MURPHY	*President*	Newport
A. CHACE SANFORD	*Secretary*	Newport

PAWTUCKET
Meets the third Thursday in each month excepting July and August

ARTHUR H. MERDINYAN	*President*	Central Falls
CONRAD E. THIBODEAU	*Secretary*	Pawtucket

PROVIDENCE
Meets the first Monday in each month excepting July, August and September

WILLIAM F. FLANAGAN	*President*	Providence
CHARLES O. COOKE	*Secretary*	Providence

WASHINGTON
Meets the second Thursday in January, April, July and October

A. B. BRIGGS	*President*	Ashaway
W. A. HILLARD	*Secretary*	Westerly

WOONSOCKET
Meets the second Thursday in each month excepting July and August

EDWARD L. MYERS	*President*	Woonsocket
E. F. HAMLIN	*Secretary*	Slatersville

Section on Surgery—2d Wednesday in each month, Dr. F. G. Phillips, Chairman Dr. Peter P. Chase, Secretary and Treasurer.

Section on Diseases of Children—3d Tuesday in each month, Dr. Henry E. Utter, Chairman; Dr. J. S. Kelley, Secretary and Treasurer.

Section on Gynecology and Obstetrics—3d Wednesday in each month, Dr. C. W. Higgins, Chairman; Dr. E. S. Brackett, Secretary and Treasurer.

Section on Medicine—4th Tuesday in each month, Dr. D. Frank Gray, Chairman; Dr. C. W. Skelton, Secretary and Treasurer

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President, Dr. Harlan P. Abbott, President; Dr. C. J. Astle, Secretary-Treasurer.

EDITORIALS

THE STATE'S CARE OF THE MENTALLY SICK.

Some things we have done well in Rhode Island, and, quite naturally, some things we have done less well. For many years this State has been dominated, one might almost say oppressed, by a tradition as false in principle as it is in practice unsatisfactory. When the social conscience of the community was not as enlightened as it is at present, the care of the mentally sick was looked upon rather as a disagreeable necessity than as a duty and a high privilege. The man with a sick body was gladly received into a hospital for general diseases; the man with a sick mind was a perplexing problem,—he was sent more often than not to a jail. It was inhuman and irrational, of course, but it was a practice born of the conviction that somehow the mentally sick man was not in the same category with other sick men. He was a social pariah whose misfortune was treated as a fault and whose disease was punished as though it were a crime. We do not say that the community *actually* believed mental disease to be a crime, but we do say that *practically* they acted with regard to it as if it were.

In the Commonwealth of Rhode Island we, through our representatives, made the initial and

regrettable mistake of thinking of insanity in terms of crime, that is to say, we looked at it through legal rather than through medical eyes, and, accordingly, we made a bad beginning,—we built our hospital for the mentally sick together with our penal institutions at Howard. We have paid the price of that mistake ever since; and this not only in the important matter of sentiment, but also in the equally important matter of practical organization and management. You cannot mix the medical and the penal problems and get anything but confusion. They are, in their very essence, distinct and what is good for one is bad for the other. Hence we observe that in the public mind of Rhode Island the name "Howard" gives rise to feelings of mingled sorrow and chagrin, for it means not only a haven for the reception and treatment of sick men, but also a goal for the detention and punishment of bad men. Thus it is that the ignorance of our fathers has landed us in a dilemma from which, as yet, we have not escaped.

We are referring to the State Hospital for mental diseases, because we wish to call the attention of our readers to the very great improvements that have been inaugurated, and some of which have been completed there, within recent years. What was once a broken-down institution, not fit for human habitation, has been altered, for the most part, into a thoroughly modern hospital of which any State might well be proud. There are some things yet to be done, but if present accomplishment is an earnest of future deeds, physicians and the community they serve may rest assured that Rhode Island is mindful of her mentally sick. But the old bugbear remains,—"Howard" means not only sickness but crime. Is it too much to hope that with modern ideas and experience to guide them our representatives will find some way to separate the sick in mind from the criminal in law? As things stand now, the situation is an anachronism. It will continue to be so as long as the House of Correction confronts directly the State Hospital for Mental Diseases.

DISTINGUISHED BRITISH MEDICAL VISITORS.

We are accustomed by this time to the visits of foreign missions, and for a time a new one appeared in this country each week. The recent visit to this country of Sir James Mackenzie, Colonel Sir William Arbuthnot Lane and Colonel Herbert Alexander Bruce of Toronto has a particular interest for the medical profession and doubly so at this moment when we are endeavoring to recruit our medical reserve corps to full strength. The mission toured the principal cities of the East and middle West, and spoke at various medical meetings and entertainments. They were greatly impressed by the thorough manner of our medical preparedness.

Sir James Mackenzie praised highly the classification of American surgeons as reported by Dr. William J. Mayo for the Committee on Surgery of the General Medical Board. The class indexing and coding of the more than 20,000 American physicians was termed ideal by Sir James, who said that the United States is avoiding the mistakes made by England. "England," he said, "was precluded from such a systematic course by the suddenness with which the war came."

Colonel Lane told of the enormous help given by American surgeons who came over long before America's entry into the war, saying that he had been asked to speak about the difficulty of getting medical men for the military service. He said: "The difficulty with us has been to keep them out. I do not suppose you are any different from our men. I have always understood that the medical people in America were the keenest people in the world. Our people have gone without a word. They gave up their practices, their futures, their wives and their children. They did not ask: 'How much are we going to be paid?' or 'What is going to become of our families?' they came at once to the aid of their country. I do not think you will have to ask the medical men to come. I think the difficulty, my friends, will be keeping them away."

Colonel Bruce said that the work of the medical men in the armies had stamped out typhus and typhoid fever, there being when he left France only twenty-seven cases of typhoid fever in an army of two million men.

Speaking at Philadelphia, Colonel Lane said: "When America sent Dr. Alexis Carrel to Europe she did more than if she had sent ammunition, guns and food. His discovery has worked miracles among the wounded of the Allies." Colonel Lane also praised highly the other doctors and nurses from the United States.

SUGGESTED BY THE CHICAGO MEETING OF THE A. M. A.

Some years ago, after attendance upon a session of the American Medical Association, a young physician remarked to an elderly one that he always felt depressed after the annual convention because of the many things he saw and heard concerning which he was ignorant and that he went home feeling that he really knew very little of the science of medicine. "Cheer up, son," said the older man, "there are probably lots of things you know that the rest don't." There are advantages to be gained by attendance at the annual meeting of the American Medical Association which are not to be measured from a strictly scientific viewpoint, and not the least of them is the study of human nature. Physicians as a rule are as human as the rest of the world and their foibles are nowhere more evident than in a great gathering of medical men.

The recent meeting at Chicago was a war meeting, everybody talked war, social functions were replaced by war speeches, and even the war was introduced as a factor in the political struggle for the office of president. A member from a Western State made an eloquent plea for the Navy and cited what great good had been accomplished by Secretary Daniels in his prohibitory amendment to former naval customs and advocated prohibition for the duration of the war and ten minutes later was imbibing steins of beer in the bar of the hotel. Two distinguished physicians talked learnedly of genetics and the effect of clean living on future generations and immediately after adjournment they both went to a moving picture theatre which had over its doors "No Ladies or Persons Under Sixteen Admitted." The physicians in attendance smoked just as much, ate quite as much of indigestible food, drank as many cocktails, and found as much fault with the prices charged for eatables and drinkables as an ordinary layman. They flocked about the booths in the exhibition hall when they gave away ice cream, while the scientific exhibit was far from crowded. They collected samples of medicines and souvenirs of the occasion quite as religiously as in former years, but did not subscribe for as many books as usual, and there was a notable diminution in the number of listeners at section meetings where the topics under discussion were not of a practical nature.

Medical politics, a feature which has done more than anything else to alienate that proportion of the profession which cares little for the office seeker, was much in evidence. There was an amount of wire pulling for the election of president which was neither dignified nor in accordance with the expressed conviction of the Association—that solicitations of votes for officers is not in accordance with the ethics of the profession.

The appointment of committees and the work done in committee was largely prearranged, and while this may have been conducive to efficiency, in once instance at least it resulted in the chairman of the committee making his report without consulting all the members of his committee and not entirely in accord with their expressed opinions.

While Chicago may be an ideal convention city, it is not adapted for the meetings of the American Medical Association if the sections are as widely separated as at the last meeting and the executive meetings held at a considerable distance from hotels. Chicago temperature in June is not conducive to long walks, and while taxis are cheap, they were not patronized by the average man as largely as by those whose expenses were paid by State or State organizations.

There was evident an aversion to unsolicited opinion. The House of Delegates with an exceedingly able executive moved like well oiled clock-work and only occasionally was there a squeak, which promptly subsided with the addition of a little more parliamentary lubricant.

The hotels were, as a rule, satisfactory and the charges, save at two of the larger ones, while high were not at present prices exorbitant. The delegate from Oklahoma remarked that where he lived he could get a cup of coffee, two fried eggs and a hunk of bacon for thirty cents, but in Chicago it cost him a dollar and a half, and the waiter thought the change from a two-dollar bill was his tip and thanked him for it.

Next year at Atlantic City the Rhode Island physician who does not attend the annual meeting will miss an educational function as well as an enjoyable vacation, and if he goes will return to his daily grind with broader views of the profession, a more intimate acquaintance with its members, and an incentive to greater effort.

OPPORTUNITIES IN THE SERVICE.

To many of the physicians who have patriotically responded to the call for volunteers for service in the Army or Navy, leaving a growing or well established practice has represented a very considerable sacrifice, cheerfully made but nevertheless entailing hardship for themselves and their families. In many instances such men have found after their induction into the service, opportunities for professional training such as could not have been presented to them had they remained in private practice; opportunities which to some extent can compensate for their personal sacrifice.

Chief among these benefits that accrue to the man transplanted from private practice to military or naval service is the opportunity for close association and consultation with other men, many of them experts in various lines. This association is often much more intimate than that between men in civil practice. In the larger army base and naval hospitals it may almost amount to a return to the days of hospital internship, an experience most beneficial to every practitioner.

Furthermore, the men that come under the charge of the doctor in the service ordinarily are drawn from all parts of the country. Thus a variety of clinical material, including tropical diseases, is assured. Specialization is encouraged and also a certain amount of research is possible, especially in the field of epidemiology and sanitation.

In volunteering the doctor expects hard work and is eager to give the best he has to the service of his country. At the same time it is a satisfaction for him to realize that in doing so he may derive very real benefit, both personal and professional.

THE WORK OF THE COUNCIL OF NATIONAL DEFENSE.

The people of this country are beginning to realize, after the first shock at the temporary failure of our aircraft program and the ship building project has been forgotten, that the present military policy of this country is well-founded. In all lines of endeavor we have builded well and firmly from the bottom up. The report of the Committee on Medicine and Sanitation of the Advisory Commission of the Council of National Defense, recently issued, is an illuminating document. The personnel of the General Medical Board is representative of the best in our profession and is broadly and wisely chosen. Every conceivable medical interest and activity which can have any possible bearing on the war has been utilized. Subcommittees have been appointed to supervise reconstruction of maimed and crippled, child welfare, venereal disease, dentistry, the publication of war manuals, hospitals, hygiene and sanitation, industrial medicine and surgery, legislation, medical advisory boards, medical schools, nursing, research, States' activities, surgery in its various subdivisions, the Volunteer Medical Service Corps and women physicians. We do not, at the present moment, recall any subject having the faintest connection with the medical aspect of the war, which has been omitted.

The Committee on Research has conducted its activities in coöperation with the National Research Council and covers a wide field of endeavor. Among the subjects investigated are: the toxicity of canned foods, digitalis grown in America, antitoxin for the Welch bacillus, ear protectors, study of antiseptics and disinfectants, study of shock, substitutes for ambrine, production of acetone by fermentation of starch, dried tetanus as antitoxin, hemostatic preparations, disinfecting wounds by means of gases, sterilization of drinking water, injuries of the peripheral nerves, methods of destroying lice, methods of vaccinating for smallpox, and agglutination tests after vaccination for typhoid fever.

The enthusiasm with which these committees have worked and the favor which their recommendations have found with the Surgeon Generals of the Army, Navy and Public Health Service, leave no doubt that the medical profession is well-prepared to care for the health of our troops and to acquit itself with credit in the great task yet before us.

SOCIETIES

RHODE ISLAND MEDICAL SOCIETY.

ANNUAL MEETING.

R. I. Medical Society Library,
June 6, 1918.

The one hundred and seventh annual meeting was called to order at 4 p. m. by the President, Dr. John Champlin.

The minutes of the previous meeting and the minutes of the May meeting of the Council and the House of Delegates were read by the Secretary.

Dr. Halsey DeWolf reported for the Fiske Fund Essay Committee that no essays had been submitted this year and announced the offering of a prize for 1919 of $200 for the best essay on the subject "Recent Classification and Treatment of Pneumonia."

The Secretary announced that no award was made by the Chase Wiggin Fund for 1918.

Dr. Roland Hammond demonstrated the patient upon whom he operated before the Society at the clinical meeting at the Rhode Island Hospital in September in 1917, demonstrating the benefit derived from the Albee operation in Pott's disease.

Dr. G. Alder Blumer made an appeal for the aid of physicians in stimulating recruiting of nurses in the Red Cross Drive about to be started and urged the conservation of nurses' services as much as possible consistent with the safety and well being of the sick.

Annual address by the President, Dr. John Champlin, Westerly, R. I., was delivered.

Program of Addresses.

DR. CHAMPLIN:

The first great accomplishment of the war is the kindling of patriotic fire in every man, woman and child in this country. For years, peace, prosperity and luxury had led us into a state of indifference, where selfishness, politics and personal comfort ruled supreme. So self-absorbed were we that not one in ten knew the national anthem, and the man who stood up while it was being played or sung was a curiosity. Our flag for years received scant courtesy, even being employed for advertising purposes. All this has changed; today the blood of every American tingles with pride at the first strain of the Star-Spangled Banner; he stands at attention with uncovered head and throbbing heart as he salutes the Stars and Stripes, which, God willing, the Germans in Berlin will be made to salute in the near future, together with the flags of our allies, when vanquished Germany will seek an honest peace. The development of the American flag and what it stands for is best told by the Hon. Samuel H. Davis.

DR. CHAMPLIN:

We all feel honored to be a part of the great medical profession; a profession that has at all times and in all emergencies proved its worth willingly and without counting the cost.

The present great crisis in the world's history has been no exception. Physicians and surgeons the world over have made willingly every sacrifice, that the soldiers and sailors may be kept fit to fight for the freedom and liberty of all mankind. Long before the United States entered the war the medical profession began to organize a great scheme for medical preparedness, which has been of infinite service to the Surgeon General in expanding the medical personnel from a mere handful of about 400 men to a quota of over 20,000 men in one year, and the end is not yet, for double that number may be required before we gain final and lasting peace. To accomplish these results someone must have had great foresight, courage and method. No person had more to do with placing the medical profession of this country in the first line trenches of preparedness and keeping them there than Col. F. F. Simpson. He has built for himself by his incessant work, courage and ability a lasting monument.

The following letter is self-explanatory:

June 3, 1918.

Dr. John Champlin,
Westerly, R. I.

My dear Dr. Champlin: On account of some new urgent and imperative duties which have just been placed upon me and which will require a maximum concentration of effort for a considerable period, I find it necessary to forego the pleasure of attending your state meeting. I have, however, asked Dr. R. L. Dickinson, of Brooklyn, a member of the staff of the Council of National Defense, to represent me and to present the subject regarding which I would have spoken. I am sure he will do it clearly, concisely and thoroughly, and that you will be pleased with his discussion. I trust, therefore, that the arrangements will go ahead as planned.

With personal regards, and with the best of

wishes for the success of your meeting and of this enterprise, I am,

Very sincerely yours,

F. F. Simpson.

Lt. Col. F. F. Simpson, M. C., N. A.,
Washington, D. C.

It is a pleasure to introduce to you Dr. R. L. Dickinson of Brooklyn, N. Y., a representative of Col. F. F. Simpson, and a member of the Council of National Defense, who will tell you of the activities of the Army Medical Corps.

Address:

"Medical Activities of the Army," Dr. R. L. Dickinson, Assistant to Lieut. Col. F. F. Simpson, Chief of Medical Section, Council of National Defense.

Dr. Champlin:

The advent of the U-boat with its ruthless warfare, which was to bring England to her knees in a few months, has brought to the minds of everyone the importance of all water transportation, and the great necessity of the freedom of the sea. Those who expected great spectacular things from the English Navy were doomed to disappointment. The great service which this navy, together with our own, has accomplished, and is now doing, by bottling up the enemy navy, and making shipping comparatively safe, is appreciated and applauded by all. While the navies are making a fine record in transporting, the medical department of the navy is doing equally well with the transported. The high-grade personnel of the medical department of the navy is doing all that was expected of it. Just what it is doing will be told us by the acknowledged medical orator of the City of Brotherly Love, Lieutenant Commander J. Chalmers Da Costa.

Address:

"Medical Activities of the Navy," Lieut. Com. J. Chalmers DeCosta, U. S. N. R. F.

Dr. Champlin:

We are told that the exception proves the rule. As a rule doctors are credited with just as little business sense as they can have, and live. When the College of American Surgeons drafted President John G. Bowman of the University of Iowa to become its Director, they proved the exception. They acquired a great organizer and classifier of great institutions. The classification of hospitals is an important war question, about which you will be much enlightened by Mr. John G. Bowman.

Address:

"Hospital Classification as Related to War-Time Needs," Mr. John G. Bowman, Director of American College of Surgeons.

Dr. Champlin welcomed to the chair and the presidency for the ensuing year the newly elected President, Dr. Gardner T. Swarts, Providence.

After adjournment, the Society reconvened at the Wannamoisett Country Club, where dinner was served. The anniversary chairman was Dr. F. T. Rogers and the speakers Rev. Willard Scott and Col. H. Anthony Dyer. Incidental music was furnished by Lucy I. Marsh (Mrs. Gordon) and Miss Marjorie Risk.

Adjourned.

J. W. Leech, M. D., *Secretary.*

Kent County Medical Society.

The regular meeting of the Kent County Medical Society was held at the State Hospital for the Insane at Howard, R. I., June 20, 1918. Under the personal direction of Dr. Harrington and Dr. Simpson an inspection of the old and new buildings of the insane department was made, during which very interesting clinics of pellagra and various forms of mental afflictions were held. Later a collation was served in the dining hall. A unanimous vote of thanks was given Dr. Harrington and Dr. Simpson for their hospitality and courtesy. It was voted to adjourn until September, 1918.

Dr. James M. Bodwell, *Secretary.*

Washington County Medical Society.

The regular quarterly meeting of the Washington County Medical Society was held at the Colonial Club, Westerly, July 11, 1918, with thirteen members present and Stephen DeM. Gage, S. B., as guest.

The committee having in charge the matter of Lodge and Contract Work presented its report in the form of a proposed amendment to the By-laws as follows:

"The Society will, by a two-thirds vote, expel any member doing lodge work, after charges in writing have been made to and investigated and sustained by the Board of Censors."

Said proposed amendment will come up for

action at the meeting to be held October 10, 1918.

A communication from J. W. Leech, M. D., Secretary of the Rhode Island State Committee, Medical Section of the Council of National Defense, was read, but no action taken.

Dr. A. S. Briggs of Ashaway, having returned to the jurisdiction of this Society, was reinstated to membership.

Dr. Stephen DeM. Gage addressed the meeting on the subject of "Public Health Now and After the War." He likewise closed the discussion which followed.

Luncheon at the club followed adjournment.

W. A. Hillard, M. D., *Secretary.*

HOSPITALS

The Memorial Hospital,
Pawtucket, R. I.

The Trustees, after considering the matter for some time, have decided to increase the rates charged for caring for ward patients:

Ward beds	$17.50 per week
Single rooms in both wards	25.00 per week
Double room in male ward	20.00 per bed per week

The following schedule of charges has been adopted by the Trustees as applying to the new private ward:

4 bed room (female)	$25.00 per bed per week
3 bed room (male)	25.00 per bed per week
2 bed room	28.00 per bed per week
10 single rooms	35.00 per week
4 special rooms at front of building	60.00 per week

Charge will be made for medicines, serums and vaccines, also extra supplies or beverages ordered.

Operating room for major operations	$10.00
Operating room for minor operations	5.00
Etherizing fee	5.00

LABORATORY SCHEDULE

Complete blood test	$5.00
Wasserman	5.00
Making and giving of vaccines and serums	5.00
Smears and cultures	2.00
Spinal fluid	10.00
Sputums	1.00
Stools	5.00
Pathological sections	5.00
Bacteriological urinalysis	2.00
Stomach contents	5.00

Patients sent in for diagnosis should pay for laboratory examinations as well as for X-ray examinations.

MISCELLANEOUS

CHILD CARE.

Things every mother must know if the nation is to meet the health needs of its children as indicated by the draft and still further revealed by the weighing and measuring test have been made available recently by the Children's Bureau of the U. S. Department of Labor in its new bulletin on Child Care, prepared by Mrs. Max West.

A third of the men examined for military service in the first draft were found to have physical defects which rendered them unfit. Many of these defects might have been overcome if they had been recognized and dealt with in early childhood; the period between two and six is often the time when such defects make their first appearance. "Child Care" has been prepared in the hope that it would enable mothers to understand and recognize symptoms which indicate the need of special care, and also to give mothers the better understanding of the simple laws of hygiene through which it may be possible to prevent the development of such defects at all. It will be especially useful to thousands of mothers who have learned by the weighing and measuring test of defects and weaknesses in their children which need particular attention.

"Child Care" deals with children from two to six years old and is the third issue in the series which began with "Prenatal Care" and "Infant Care." It contains simple rules of health and hygiene, including carefully compiled directions about proper food, suitable clothing, suggestions for play and exercise, for discipline and training. It gives simple menus for young children. A list of books on child care and training is added.

HONOR ROLL.

Lieut. Irving F. Armstrong, M. R. C., U. S. A.
Lieut. George G. Bergeron, M. R. C., U. S. A.
Lieut. John A. Biggers, M. R. C., U. S. A.
Capt. Arthur B. Bradshaw, M. R. C., U. S. A.
Lieut. (Junior Grade) Henry S. Brown, U. S. N. R. F.
Lieut. Clyde B. Covey, M. R. C., U. S. A.
Lieut. John M. F. English, U. S. N. R. F.
Lieut. (Junior Grade) C. J. C. Gillon, U. S. N. R. F.
Lieut. Edward C. Goldcamp, M. R. C., U. S. A.
Capt. Malcolm Gunn, M. R. C., U. S. A.
Lieut. Jonathan P. Hadfield, M. R. C., U. S. A.
Lieut. John L. Healey, M. R. C., U. S. A.
Capt. Peter W. Hess, M. R. C., U. S. A.
Lieut. (Junior Grade) G. Houston, U. S. N. R. F.
Capt. Ernest Jenkes, M. R. C., U. S. A.
Lieut. Alfred F. McAlpine, M. R. C., U. S. A.
Lieut. James M. McCarthy, M. R. C., U. S. A.
Lieut. John H. Morrissey, U. S. N. R. F.
Lieut. T. G. Norman, M. R. C., U. S. A.
Lieut. T. H. Raines, M. R. C., U. S. A.
Lieut. John E. Ruisi, M. R. C., U. S. A.
Lieut. George Watt, M. R. C., U. S. A.

THE RHODE ISLAND MEDICAL JOURNAL

The Official Organ of the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

VOLUME II
NUMBER 9
Whole No. 123
PROVIDENCE, R. I., SEPTEMBER, 1918
PER YEAR $2.00
SINGLE COPY, 25 CENTS

ORIGINAL ARTICLES

NODULAR SYPHILIS.

By C. Augustus Simpson, M. D.,
Newport, R. I.

The two photographs are of two patients presenting nodular syphilis, each having been wrongly diagnosed epithelioma.

The clinical diagnosis of the above lesions is often beset with difficulties. The reasons for this are the comparative uncommonness of the lesion, the tendency of many medical men to suspect malignancy when an isolated, ulcerated tumor occurs in a patient of the cancerous age, and the fact that it is a late lesion developing many times years after the initial lesion and the secondary eruption. A history of syphilis is seldom obtained, the patient purposely or carelessly forgetting the incident. Three years ago I had a patient who suffered from a circumscribed nodular lesion on the right cheek the size of a quarter. Areas of superficial ulcerations and scar tissue were present in the lesion, the patient complained of some pain and the development of the tumor had required some months. In this case the objective and subjective symptoms of epithelioma were so closely simulated that a physician of another city had previously exposed him to massive doses of X-ray, naturally with no result. During my service on the staff of the New York Skin and Cancer Hospital a patient came on Dr. George M. Fox's clinic presenting a fungating, ulcerating, infiltrated lesion that bled easily and involved the entire distal end of the penis. The glands had been destroyed and also part of the shaft. The patient, who was about forty years of age, complained of some pain and the lesion was some months forming. Chancroidal ulceration could be eliminated in the diagnosis and a majority of the specialists present thought it was an epithelioma. Some one suggested mercury internally, with the result that the entire lesion healed in three weeks and the patient was spared an amputation, although most of the organ had been destroyed by the syphilis.

In the two cases here shown the patients were both over thirty-five years of age, the lesions were single, circumscribed, indolent, ulcerated and caused some pain. On the ulcerated surfaces the secretions were scanty and the tumor was sprinkled with areas of atrophic and scar tissue, an objective symptom that is often present in nodular syphilis, but which may occur in epithelioma, as the third picture, epithelioma, will show.

I am sure my experience is not unusual and

Fig. 1. Nodular Syphilis of upper lip showing some old scars.

other dermatologists must occasionally meet with similar instances of the incorrect diagnosis of this lesion. For this reason a few words on the main points in the differential diagnosis of nodular syphilis seems permissible. In this climate which generally excludes tuberculous leprosy one has most frequently to rule out epithelioma and lupus vulgaris. Occasionally nodular syphilis resembles resacia to a marked degree. The dark ham color, sharply defined infiltration and short duration should put one on one's guard and additional signs of syphilis looked for.

Psoriasis will seldom be confused with the type of syphilis I have illustrated because of its more generalized distribution, the absence of scar tissue and the lack of infiltration in the psoriasis.

The type of epithelioma most frequently simulated is the discoid lesion and the rodent ulcer. The discoid epithelioma often has for its origin a wart, naevus or excerision. As a result of traumatism, such as the continuous application of a mildly stimulating drug or the electric needle, the cutaneous covering of the lesion is damaged or destroyed.

A drop of blood or serum may exude from the erosion; a crust forms which may remain in place for some time. The patient feels that a cure of a harmless "pimple" is at hand, but sooner or later the crust comes away and a small ulcer is to be seen. The floor of the ulcer is often uneven, covered with translucent granulations, bleeds easily and is surrounded by an irregular, everted, rolled, waxy border. May be very sensitive and painful. Rodent ulcers often begin in a seborrhoic wart, "Irish freckle," or small scale covered pigmentations so often to be seen on the hands and faces of elderly persons. In time the pigmentation and scales increase, the wart becomes thicker and some traumatism later breaks the skin. A crust forms, later falls, and another takes its place. This evolution may be repeated for months or years, the wart in the meantime increasing but little in size. On removing the crust an irregular, granulating ulcer is to be seen which shows feeble or negative attempts to repair itself. Its floor is irregular, reddish, bleeds

Fig. 2. Nodular Syphilis of upper lip

easily and is surrounded by an everted, indurated, waxy, fluted border. The pearly gray borders are of almost cartilaginous hardness and have coursing over them dilated blood vessels.

There is some congestion beyond the everted borders, but the color is not so deep or extensive as is to be seen in nodular syphilis. For a lesion to develop to the size of a quarter would require years, as a rule, while in syphilis it would take only a few weeks. Epithelioma remains more or less stationary, while nodular syphilis infiltrates, ulcerates and heals by a scar as it advances from point to point. Epithelioma occurs as a rule, not always, in an older subject who shows no disturbance of nutrition. A patient with nodular syphilis will often show cachexia, scars, a gummatous infiltration of the epididymis

Fig. 3. Epithelioma, at the upper edge a scar shows that the tumor has healed at that point.

or testicle, or an adherent, irregular or irresponsive pupil.

If age is an important factor in differentiating nodular syphilis from epithelioma it is doubly important in ruling out lupus vulgaris. Lupus occurs or begins at least only in young patients, most often the third and sixth year. It is more common in the poor, filthy and degraded. Eighty per cent. of the lesions are on the face, more than half of these are on the nose, while practically all of the nasal cases show mucous membrane involvement. Lupus begins as a reddish-brown or yellowish, soft nodule about the size of a match head; the lesion may be slightly elevated. If one presses the congestion out with a glass slide, the brownish color of the tubercles is to be seen quite clearly. The tubercles coalesce, others develop in the neighborhood and in time quite a patch of the disease is present. In the exedens form of lupus, which closely resembles ulcerating nodular syphilis, thin edged, oval, round, flat, superficial ulcers develop. The floor of the ulcer is bluish, congested and covered with indolent granulations. There is as a rule little infiltration and the base of the ulcer is most often soft and pliable.

Nodular syphilis occurs as convex projections

of the skin varying in size from a quarter of an inch to an inch or more in diameter. They may be quite elevated, sharply defined, of a characteristic coppery color, sometimes scaly or the infiltration may have broken down to form superficial ulcerated areas of an irregular bean or horseshoe shape. The ulcers are sharply defined with punched out margins and of a circinate outline. The circumscribed lesions usually involve one area, as the lip or nose, and may be painless. They are quite sluggish in development, but rapid in this respect when compared to the time it takes an epithelioma to assume a corresponding size. Rupial crusts are usually absent; the surfaces of the ulcers do not show such congested granulations as one sees in an epithelioma. One seldom gets a history of bleeding. As a result the everlying crusts are composed more of necrotic tissue and pus than of blood as in epithelioma. Along with the ulcerations of nodular syphilis one will find the smooth, white, flexible, cigarette paper scars of old healed lesions.

RECENT PROGRESS IN THE STUDY OF CERTAIN INFECTIONS.*

By Alex. M. Burgess, M. D.,
Providence, R. I.

As a result of the war the investigation of several of the infectious diseases has received a very strong stimulus. The need for more effective control of some of these, especially lobar pneumonia and epidemic meningitis, has become so urgent a matter that many of the best trained investigators in the fields of bacteriology and sanitation have been devoting their entire time to the subject. The experience of the Allied armies and of our own forces in the early months of mobilization demonstrated the inadequacy of the methods then employed. The story of the problems with which the investigators have been confronted, of the dire need that those problems be satisfactorily solved, and of the way that many of them are being surmounted, is not altogether without romance. It represents achievements of which we, as American physicians, may be justly pround.

Time will not permit of more than a very brief sketch of the work on the various infections, nor is it my intention to present to you a detailed account of it. With much that I have to say you are doubtless familiar. I shall, therefore, limit my discussion to a summary of the progress of the investigation of pneumonia and epidemic meningitis, and shall also briefly refer to bacillary dysentery, typhoid, gas bacillus infection, and spirochetal jaundice.

Pneumonia: The essential factor which forms the basis of most of the newer work on lobar pneumonia is the separation of pneumococci into types, and the recognition of the relation of these types to the disease as seen clinically. Prolonged study of the members of these sub-groups on artificial media and in animal experiments has shown that they remain constant and can never be transmuted one into another. In fact, the pneumococci, far from being members of a broad group to which the pathogenic streptococci also belong, are sharply distinguishable from all other organisms, and even their subgroups are biologically distinct. Further research has failed to substantiate the reports of E. C. Rosenow of the transmutability of members of what he calls the streptococcus-pneumococcus group. To the clinician, however, this discussion may perhaps seem academic. To him the significance of the type classification of the pneumococci is not apparent until the relation of the types to the disease in the human being is elucidated. This question has been fully studied, and new data bearing up it are constantly being recorded. I shall attempt to summarize in brief the results of this work, carefully omitting technical details.

1. Brief description of types:

Types I and II. Typical pneumococci with well developed capsules. Responsible for over 60 per cent. of lobar pneumonia. Biologically distinct from each other and agglutinable each by its own specific anti-serum only. With Type II. are grouped also a number of variants called atypical Type II organisms. Pneumococci of Types I and II are practically never found except in actual cases of pneumonia, convalescents and contacts. Mortality: Type I, 25 per cent. Type II, 32 per cent.

Type III. Pneumococcus mucosus. Mucoid growth on solid media. Voluminous capsule. Agglutinated by its own serum only. Frequently found in the saliva of healthy individuals. Produces the most virulent type of pneumonia. Mortality, 45 per cent.

*Read before the Clinical Club, March 27, 1918

Type IV. Under this heading are grouped the remaining pneumococci, those not included in the three so-called "fixed types" just described. Many of these do not show a capsule. The relatively harmless pneumococci which occur almost universally in the saliva of healthy persons belong to this group. Organisms of this group produce a relatively mild form of pneumonia. Mortality, 16 per cent.

2. Type determination:

This is made by specific agglutination tests using organisms grown from the sputum or blood, or by precipitin reactions on body fluids which may contain the saluble substance produced by the organism, for example, the urine and the spinal fluid. The ordinary method is to inject a mouse intraperitoneally with fresh sputum, and after from four to six hours to wash out the peritoneal cavity with saline and test the washings by precipitin tests with sera prepared against Types I, II and III, respectively.

The soluble precipitin formed by the growth of pneumococci in fluid media is probably identical with the so-called capsule. It is to be noted that the amount of this substance produced, that is, the voluminousness of the capsule, corresponds to the virulence of the organism.

Excluding the Type IV group from discussion, we find that of the others Type I is the least virulent and possesses the least pronounced capsule, while Type III is the most virulent and produces the largest capsule. Type II occupies an intermediate position.

3. Prognosis.

The typical differences in virulence of the types of pneumococci which have just been discussed make type determination of value in estimating the prognosis in a given case of pneumonia. Type IV of course offers the best prognosis, and Type III the worst.

Estimation of the degree of infection as determined by blood culture offers another valuable means of gauging the outlook. At the Rockefeller Institute no case of Type III infection with a positive blood culture has been known to recover. In Type II infections the disease has been fatal in every instance in which 15 or more colonies per cc. of blood developed.

A third test which aids in prognosis is the precipitin reaction in the urine. Heavily infected individuals, especially if infected with the more virulent organisms show the soluble pneumococcus substance in the urine in sufficient quantity to cause a marked precipitation when the homologous serum is added. Thus by a simple test of the urine it is possible in some cases to make the type diagnosis and at the same time acquire valuable information as to prognosis.

A study of the white count should also be made in every case. A good leucocytic reaction is to be desired, and a count below 10,000 is ominous.

4. Serum therapy:

The power of the fixed types of pneumococci to form a therapeutically effective antiserum appears to vary inversely as the virulence and capsule formation. With Type I organisms an antiserum has been produced in the horse which if injected early, intravenously and in sufficiently large quantities in cases of Type I pneumonia is very effective. A similar serum can be produced against Type II, but its use is apparently without therapeutic effect. Against Type III it is almost impossible to produce a serum in the horse. Type IV pneumococci being really a heterogeneous group, are of course not used for the production of an antiserum.

The following routine clinical laboratory procedure may well be carried out on a case of pneumonia as soon as the diagnosis is established: (1). Sputum collected for type diagnosis. (2). Urine collected for type diagnosis and routine examination. (3). 0.02 of 1/10 dilution of serum given intradermally to denote serum sensitization if present. (4). 0.5 to 1 cc. injected subcutaneously as a desensitizing dose. (5). Leucocyte count. (6). Blood culture. (7). Intravenous administration of serum of infection proves to be by Type I organism.

5. Epidemiology:

It has been mentioned before that pneumococci of Types I and II are very rarely if ever found in the mouths of normal persons. At the Rockefeller Institute in 297 observations, only once was Type I discovered (0.33%) and in no case was a Type II organism found. On the other hand, among 309 healthy people who lived in contact with cases of pneumonia Type I and II, from 12 to 13 per cent. were found to be carriers of the type organisms. A study of convalescents showed that the persistence of the type organisms in the oral secretions varied from 7 to 90 days, averaging about three to four weeks. Contamination of the dust of rooms in which these cases have been kept has been shown to exist in about

30 per cent. of the instances studied, while in but one instance was a Type I organism found in the dust of a room where no pneumonia had occurred. We may then conclude that in case of Type I and II pneumonia, at least, infection occurs in practically every instance from without by the agency of convalescents, healthy contact carriers and dust contamination. Thus pneumonia may be regarded as in the majority of cases a disease that may be prevented by measures of isolation and medical asepsis such as are applied in other communicable diseases.

Meningitis. The problem here presented in the early months of mobilization of American forces was a double one, that of prophylaxis and that of treatment. Experience of former years, and more especially that of the British and French forces, has emphasized the fact that when large numbers of men have been herded together violent outbreaks of meningitis occur with much more virulence and frequency than they do in civil life. The point is that in military encampments a few chronic carriers are brought into contact with a large number of persons of susceptible age. A number of temporary carriers are created, and of these some develop the disease. Epidemic meningitis always arises in a carrier.

Detection of carriers:

Inasmuch as the meningococcus exists in the naso-pharynx of the carrier, it becomes necessary in order to detect its presence to make cultures from the naso-pharyngeal mucus. Contamination with saliva must be rigidly avoided, for in the presence of micro-organisms usually found in saliva the meningococcus refuses to grow. On the whole the organism is a very fastidious one and the technical difficulties connected with cultivating it from the naso-pharynx are many. I shall omit a description of these difficulties. The instrument for taking the culture is known as the West tube, of which a demonstration is easier than a description.

When this has been properly used to inoculate plates of culture media, the colonies resulting are examined with a hand lens, and suspicious ones are fished and plated. The final identification of the organism is made by agglutination tests against the polyvalent serum, which I shall describe later. The volume of work involved in the examination of a hundred men in this manner is immense.

It has not yet been definitely decided by medico-military authorities to what extent examination of troops and isolation of carriers can be carried on without definite harm to military efficiency. When, however, a focus of infection has been demonstrated by the occurrence of an actual case of the disease, all are agreed that contacts should be examined and isolated, and the more extensively this can be done the better from a sanitary point of view.

Serum treatment:

It has been realized of recent years that the antimeningococcus serum that has been in use, while very effective in some cases, has proved practically useless in others. With the entry of the United States into the war it became imperative that this condition be remedied, and that an universally potent serum be produced. The problem did not appear to be a simple one. Much suggestive preliminary study of the meningococcus had, however, already been made with the result that it had become apparent that the term meningococcus embraced several organisms which were not serologically identical. A strain called regular, or normal, meningococcus, and a strain called para-meningococcus had been identified, and it was found that a serum prepared against one of these would agglutinate the other practically not at all. As the work progressed there were discovered intermediate between these two extremes many strains of the organism which reacted with both "normal meningococcus" serum and "para-meningococcus" serum to a moderate and varying degree, though with neither to the extent to which it reacted with a serum prepared against itself. Such an organism was classed as an "irregular" strain, or as an "irregular normal" or "irregular para" according as its agglutination reactions indicated it to be related more closely to one or the other of the extremes. This information disclosed at once the reasons for the weakness of the therapeutic sera that had previously been used—namely, insufficient polyvalency. A thoroughly effective serum, it was soon recognized, must be one in the preparation of which all distinct strains of the meningococcus had been used. Accordingly horses were injected according to the established methods, using for injection a mixture of all the differing strains of the organism that could be obtained. This resulted in a serum with a high agglutination titre for all the organisms used in its preparation. Since that time every new meningococcus that came to hand which was not agglutinated in high dilution by

the polyvalent serum was added to the injection mixture used in preparation of the serum, and in this way the serum was made effective against the new organisms as well. In November, 1917, about 42 strains of meningococci entered into the injection mixture. At that time a communication arrived from the British Navy which stated that of all the polyvalent sera used, that prepared at the Rockefeller Institute alone reacted with every strain of meningococcus encountered in the course of a very extensive research.

To secure clinical results the polyvalent serum should be administered early, and the dosage should be sufficient. Warmed serum should always be at hand at the first diagnostic spinal puncture to be administered if a cloudy fluid is obtained. If possible 50 cc. of spinal fluid should be withdrawn and 40 cc. of serum injected. The injection should be repeated every twelve hours until the temperature is normal and the spinal fluid has cleared considerably. Then every twenty-four hours for at least three injections, and thereafter once or twice at forty-eight hour intervals. These last injections are effective in preventing the very distressing recurrence of acute symptoms which sometimes occurs. Thus far the new serum has proved very effective when used early and in the manner described.

Intravenous injection of the serum should be applied as a supplementary measure in cases where stupor has supervened or where "spots" occur. It blocks the diffusion of the infection from the spinal canal into the general circulation. Fifty cc. diluted with saline is the dose used as a rule. When the course of the disease has been progressing favorably and then alarming symptoms recur without the recurrence of turbidity in the spinal fluid, a plugging of the foramina between ventricles and spinal canal is suggested. Prompt ventricular puncture is indicated and may save life.

Other Infections: Dysentery. Work in this field has been mostly along the lines of perfecting methods of carrier identification by means of stool examination and the development of an effective serum. No distinctly new methods have, I believe, been introduced. Although the definite difference between the highly toxic bacillus of Shiga and the non-toxic organisms of the Flexner group has been further emphasized by recent studies, both types are included in the polyvalent serum now being produced. In the use of this serum it is recommended that 100 cc. be given intravenously at twelve hour intervals for two doses, to be followed by one dose of 40 cc. subcutaneously twenty-four hours later. In controlling an outbreak of dysentery in a military camp the following procedures should be carried out:

1. Isolation of cases with "typhoid precautions."
2. Examination of contacts for dysentery bacilli.
3. Examination of cases of mild diarrhoea for dysentery bacilli.
4. Neighborhood quarantine, including isolated cases or epidemics near the camp.
5. Destruction of the bacillus by sterilization of soiled linen, screening of privies, etc.

Typhoid Fever. Treatment by an antityphoid serum has been attempted and the few reports on the subject that so far have been made appear to be encouraging. This is the logical way to treat the disease, and is the one which will probably be developed during the next few years. "Shock therapy" so-called, that is, the intravenous injection of a foreign protein to produce an artificial hyperpyrexia and hyperleucocytosis, though by no means a logical method of treatment, is often strikingly successful. The method used is ordinarily the injection of killed typhoid bacilli, but many other proteins have been used with equally good results. Four personal cases were reported by the writer a year ago, and recently Dr. Henry A. Cooke, in a paper read before this society, has described a larger number. Fatalities have occurred and the present opinion of the men best qualified to speak on this subject is that the method should be used with caution, but that it still remains the method of choice in mild early typhoid.

Gas Bacillus Infection. Clinical and pathological observation of gas bacillus infection has suggested that the action of the organism must be mainly toxic in nature. It was until recently, however, impossible to separate any toxin from the organism, or to produce antitoxic sera. Intensive study of the bacillus, especially its cultural characteristics and pathogenicity, demonstrated that in glucose broth to which small fragments of rabbit's muscle had been added a very marked production of toxin occurs during the first twenty-four hours of growth. The germ-free filtrate of such cultures is highly toxic for

guinea pigs and especially pigeons. By graded injections into horses an antitoxic serum has been produced which has given very favorable results in the clinical trials that have thus far been made. Its value in the present war would be greater had not prophylactic measures against the occurrence of gas infection been so effectively developed.

Spirochetal Jaundice, or Weil's disease, has been of some interest on both the eastern and western fronts, where its mortality has been about ten per cent. In Japan it reaches forty to fifty per cent. The organism, a thick, extremely motile spirochete, occurs in rats, and the disease is supposed to be spread by them. The spirochete can penetrate the unbroken skin. Noguchi has found the organism in wild rats in New York city.

Summary: The foregoing account is far from complete. I have attempted to mention some of the phases of the work on infections as it is being carried on at the Rockefeller Institute and elsewhere, and to emphasize phases of the work which in my judgment would be of interest to the members of this club. Many of the problems are still but partly solved, and new data are constantly being accumulated. To the clinician this is all very interesting and valuable, but to the man who can grasp the technical difficulties that have beset the way of the investigators and who feels the romance of culture tube and microscope and the very big significance of very little things, it is inspiring.

STATE HOSPITAL FOR MENTAL DISEASES—LANTERN SLIDES.*

By Arthur H. Harrington, M. D.,
Howard, R. I.

At the meeting of the Providence Medical Association held Monday, May 6, 1918, a talk was given by the writer on the State Hospital for Mental Diseases, this talk being illustrated by about sixty lantern slides.

Previous to 1870, the insane chargeable to the State of Rhode Island and to various cities and towns in the State were cared for at Butler Hospital, in hospitals and asylums in other States, in various almshouses within the State, and in some cases patients were intrusted to the care of persons who would agree to provide for them at the lowest price. Some very interesting reading relating both to the care and to the neglect which was meted out to dependent insane persons may be found in the chapter entitled "The Poor, the Defective and the Criminal," in the third volume of Edward Field's work, entitled "State of Rhode Island and Providence Plantations at the End of the Century."

The development of the public care of the insane in Rhode Island has been so involved with provisions for the care and custody of the poor, the reformatory, the correctional and the penal classes, that the history of the State Hospital for Mental Diseases cannot be treated as a segregate topic, at least during the earlier years of making provisions for the mentally sick. Even today the line of cleavage between the mentally sick and other classes is somewhat obscured because the unfortunates afflicted with mental disease, the maimed in body, minor offenders against the law as well as criminals of all grades who are undergoing sentence for crimes, are all located at Howard, practically within a stone's throw of one another.

In 1867 a resolution was adopted by the General Assembly appointing a committee to inquire into the expediency of erecting a state asylum for the insane. [1]During the session of 1868, the question of providing care for the insane became involved with the whole subject of the care of paupers, criminals and the helpless. As the final result of these deliberations the William A. Howard farm in Cranston was purchased "for the location thereon of a House of Correction, a State Asylum for the Insane and for such other purposes as the General Assembly may direct." The following is the list of institutions which exist at Howard today: State Workhouse and House of Correction, State Reform School, State Prison and Providence County Jail, State Infirmary and State Hospital for Mental Diseases.

The administrative control of all these institutions has been vested in the Board of State Charities and Corrections, the Board of Control and Supply, and at present, these boards having been abolished, they are all under the control of the Penal and Charitable Commission.

Until 1897, the State Hospital for Mental Diseases was conducted by a lay superintendency, the medical care of the patients being provided for by visiting physicians and later by resident physicians who under the lay superintendent acted as "deputies."

*Read before The Providence Medical Association, May 6, 1918

It is to the credit of the medical profession of Rhode Island that an agitation was begun in 1894 for the purpose of bringing about changes in the statutes which would place the State Hospital for the Insane under a medical superintendent. After some opposition and much deliberation in the General Assembly, this was accomplished. At the time this was done the hospital had grown to seven hundred patients and over.

Previous to 1885, cases of mental diseases regarded as chronic were the only class received at the asylum. In that year, however, the General Assembly by an act made it possible to receive all forms of mental disease, acute as well as chronic, occurring in such persons as were dependent for their support upon the State of Rhode Island. The Board of State Charities protested this act as the hospital was not equipped for the care of all forms of acute mental disease. Nevertheless, from that day the State Hospital has been a receiving hospital for all forms of mental disease.

The lantern slides are calculated to show the development of the State Hospital for Mental Diseases along the lines of construction; the domestic work of caring for the institution, showing methods of preparing and serving food; the various occupations which are carried on and in which patients are engaged; methods of entertainment and amusements for patients; the medical organization of the hospital and methods of caring for patients.

In relation to buildings, the slides show the original wood structures of one story which were opened in 1870. It was officially stated at that time that these buildings were to be regarded as temporary until suitable structures could take their places. It has been nearly half a century since those words were written and these buildings have been vacated only within the last year. They are now being torn down. The slides show the dilapidated state into which these structures had been falling. The crowded condition of various parts of the institution which has existed in recent years was illustrated by showing wards and dormitories in which all available space was occupied by beds. There were several slides illustrating floor beds and the method of sleeping patients on these beds, which are made up at night on the day spaces.

There were then shown numbers of slides illustrating the buildings, both exteriorly and interiorly, which have been provided from the bond issues, portions of which have been appropriated for the State Hospital. Since 1909, nine hundred thousand dollars have been spent at this hospital for construction and permanent improvements. The buildings which have been erected are a laundry building, which will suffice for this hospital if it should grow to twice its present size; a reception hospital building for the treatment of new and acute cases. Every case committed to the State Hospital is received in this building, which is constructed, equipped and administered on the lines of a general hospital as far as it is possible to care for the mentally sick on strictly hospital lines. A description of this building, together with illustrations showing floor plans, together with the methods of receiving and caring for new patients, may be found in the April, 1918, number of the "American Journal of Insanity."

Other new buildings are a three-story, fireproof structure for three hundred men patients of the quiet and orderly class who are engaged in various occupations about the hospital; a group of buildings which have been renovated and in connection with which some new structures have been added, giving accommodations for four hundred women; a new kitchen and service building of sufficient capacity to handle all food supplies and their preparation if the hospital should become considerably larger than it is today.

The present capacity of the hospital, without crowding, is thirteen hundred and eighty-five patients. We have, at the present time, over fourteen hundred patients. With the expenditure of nine hundred thousand dollars of the money of the tax payers of the state, it is quite generally believed, I think, that sufficient provision has been made, as far as the housing problem is concerned, for some years to come. But there is a fallacy here which can be readily explained and which it is quite necessary that every one in the state should understand. While we have been making additional provision for the accommodation of patients since 1909, yet since that time we have gained nearly four hundred patients and we are abandoning and tearing down old structures no longer fit for use which accommodated two hundred and fifty patients. So that while practically we have made new accommodations, every one of these places is taken up by the increase of patients and by the

having to find quarters in the new structures for the patients who have been removed from the abandoned buildings.

We have a steady growth in numbers of from twenty-five to fifty patients each year. With our present capacity all taken up, it can readily be seen that we have no time to lose in increasing the size of this plant in order to make it adequate to accommodate the number of mental cases who will increase year by year in proportion to the gain in our state population. There are several buildings yet, the outer walls of which are of strong masonry construction, which should be completely made over as to their interiors. To take care of the coming needs of this hospital within the next five years and to put the older parts of the plant in sanitary condition, we should have at least five hundred thousand dollars.

What has been done here within the last few years as far as we have gone is practically the building of a new hospital plant, and in order to do justice to the cause of the mentally sick, the work must be completed in a manner in which the State may take pride.

References.

1. "State Hospital for the Insane, Howard, R. I." By A. H. Harrington, M. D. Vol. III, The Institutional Care of the Insane in United States and Canada.
2. "The Congregate Dining-Room and Its Management." By A. H. Harrington, M. D. Transactions of the American Medico-Psychological Association. 1913. Vol. 20.

REPORT OF A MEETING OF STATE SECRETARIES IN CHICAGO REGARDING THE MEDICAL RESERVE CORPS.*

By J. W. Leech, M. D.,
Providence, R. I.

At the request of the War Committee of the American Medical Association, I attended on April 30 a conference of Secretaries of State Societies at Chicago for the purpose of discussing the recent request of Surgeon General Gorgas that the American Medical Association use its machinery to enroll at once 5,000 physicians in the Medical Reserve Corps. The reason the Surgeon General's office has turned to the American Medical Association is, I believe, due not to any breakdown in the machinery which has been conducting the campaign for medical enlistments—namely, the Medical Section of the Council of National Defense—but rather to an appreciation of the really wonderful organization of the medical profession under the guidance of the American Medical Association and the realization that if results were to be obtained as promptly as the urgency of the call demanded, the work of propaganda in the medical profession must be carried on by efficient organization. And I doubt if there is a better organized and more closely knit group in the country than the medical profession, chiefly through the activities of the American Medical Association. I have made this somewhat extended explanation because there has unfortunately been spread abroad in certain circles an erroneous impression that the Council of National Defense was to be "shelved" by the American Medical Association. On the contrary, it is the desire of the Association and the opinion of the majority of those attending the conference to utilize the machinery already in existence and in action, and especially the State and County Committees of the Council of National Defense, Medical Section, where they are doing good work rather than to build new organizations for the work of encouraging the enlistment of physicians in the Medical Reserve Corps. And the value of this means of reaching the medical profession of the country may be seen from the fact that following the first call for Medical Reserve Officers in the Journal of the A. M. A. last year, there were 1,300 applications on the Journal's blanks made in the month of April alone.

Now, the reasons of this unprecedented demand for 5,000 physicians for the Army are many, and doubtless some of them are so closely articulated with military affairs as to preclude their publication. But one of the reasons is that the previously accepted ratio of seven physicians to 1,000 men has been found to be too small, and the character of the present warfare, the large-scale actions where battles are of weeks and months duration, rather than of days, and where the casualties are on a like scale, has determined this state of affairs, namely, every 100 men in the Army requires the services of one physician. The arithmetic of arriving at an estimate of the number of physicians needed to care for an army of the size now being talked about in and out of Congress is simple, the result impressive.

*Read before The Providence Medical Association, June 3, 1918

Another thing that opened the eyes of those in Washington to the need of increasing medical enlistments was the fact that in one week in April of this year the service discharged for a variety of reasons 76 commissioned medical officers and received only 66 new acceptances of commissions, a net loss in one week of medical officers sufficient to care for 1,000 troops. You will please note that I say "acceptance of commission," and right here permit me to point out that until a man *accepts* his commission, the country can no more count upon his services than if he were not in existence.

We have all been inclined to look with pride upon the response of the medical profession to the call of the country, and rightly too, for up to April 1, 1918, 22,916 men have applied and 18,693 have been awarded commissions in the Medical Reserve Corps of the United States Army. But there is a vast difference between pride and complacency, and the latter feeling we are not justified in indulging in until Surgeon-General Gorgas tells us that he has got all the medical officers he wants, and I am sure there is not one of us here but is willing to do his share in reaching that point.

At the conference every State in the Union was represented either by its State Secretary or an alternate. In passing I might say that there must be a unanimity of feeling in State Medical Societies to elect as their secretaries "the lame, the halt, and the blind," for nearly every one of us there was of military age, and we *must* have had some such excuse for not being in khaki.

The secretaries gave their experiences, their hopes and their fears in regard to the subject in hand and it was really most illuminating and indeed very comforting to find that those things which we in Rhode Island "have done that we ought not to have done, and those which we have left undone that we ought to have done" is the experience all over the country. Men have gone into the service who by reason of dependents, physical or mental abilities, or, rather, lack of them, should never have been commissioned. Commissions to grades not commensurate with the ability shown in civil life have been awarded to physicians, and communities have been stripped of sufficient medical attendants for the civil needs of the people. Fortunately, for Rhode Island, none of these faults have been prominent nor frequent, and the last item—depriving the civil population of the minimum of medical population—will probably not obtain at any time on account of the limited geographical extent of our State and the close inter-relation of the several communities. The civilian population of Providence and Pawtucket, Bristol and Providence, Cranston and Warwick, etc., are normally served by physicians resident in either district. However, in many of our great Western States, communities have already suffered from this condition. As an illustration, in Arizona, a State of immense copper mining industries, which maintain large medical staffs, 25 to 30 per cent. of the men in one county have entered service; out of a staff of 21 physicians connected with one mining company five have enlisted and are in active service. Again, from one town in the State of Maine with 11 doctors, five have gone.

It was the purpose of this conference, among other things, to prevent these inequalities occurring in this coming drive for 5,000 new medical officers.

A condition practically common to every State in the Union, as reported by the secretaries at the conference, is that the enlistments on the whole have been from the two extremes of the profession as regards age, namely, the young physicians under 31 years of age and what many termed "the cream of the profession"—those between 45 and the top age of 55. Now, I do not wish to be misunderstood in my next remark, for it is said in no wise as derogatory to or in depreciation of the patriotism of our young physicians, but nevertheless it is a fact, that the first group of men would be eligible at all events under the Selective Service Act whether or not they sought a commission in the Medical Reserve Corps. And let me take this opportunity to express the highest admiration for the enthusiasm these young men have shown in seeking service. To the second class, too, the greatest honor is due, for their sacrifice of established and growing families, and of thriving practices. The comforting assurances that now by their own efforts the rough and thorny task of building a practice has been finished and that they might now look forward to a life of work in self-chosen fields has been bravely, resolutely, and with a high sense of patriotism put aside until this job "over there" is done.

There remain the intermediate class—those of us from 35 to 45 years of age—who must be reached and who must be impressed with the

vital necessity of looking at this war as *our* war, and of doing *our* duty. I believe that Rhode Island will not call in vain upon this group of physicians. In a way the physicians in the middle of the third and fourth decades of life are the flower of the flock, for what they lack of their older confreres' ripened wisdom of years of experience is counterbalanced by their natural adaptability and flexibility of mind to adjust themselves to military life, and their physical fitness for the rigors incident to it. I, therefore, urgently appeal to you to most seriously consider how *much* you can give, and, if it is possible, to offer yourself as one doctor ready and willing to safeguard the health and bind up the wounds of 100 brave fighting boys.

Rhode Island has approximately 600,000 inhabitants and 772 physicians. There have been commissioned 128 out of a total of 376 physicians eligible, as regards age, to the Medical Reserve Corps. We have been apprised in a semi-official way that Rhode Island's quota in this new "drive" will be 50 more physicians to be enrolled in the Medical Reserve Corps. Where are we going to get them? For the most part, from the larger cities where the medical population is proportionately thicker than in the country districts. This is evident upon the face of it; nevertheless, the country districts will be called upon to do their share and will, I know, duplicate their action in Liberty Loan subscriptions, Red Cross, Y. M. C. A. and Knights of Columbus offerings and go "over the top" with their city fellows.

In order to prevent the stripping of communities of the minimum medical requirements, and partly as a result of the conference of State Secretaries held in Chicago, the American Medical Association has prepared a comprehensive survey of the whole country which will be made available to every physician in the State through the Journal of the American Medical Association and the Rhode Island Medical Journal. To the Secretary of each district Society will be sent a list of physicians in his county arranged by post-offices. On this list will be indicated: (A) Those who are commissioned. (B) Those who applied for commissions but were rejected and those who have been discharged. (C) Those over 55 years of age.

With this data in hand, the district Society officers and their auxiliary War Committees can easily determine how many and which men should be allowed the privilege of applying for a commission and those who should remain home to care for the civil needs of the population.

Rhode Island *must* fill her quota and will more than do so if every one of us will take to heart the appeal which will be made to him and meet the issue as he meets the issue of life and death at the bedside—with courage, fortitude and unselfishness. Don't let our soldiers suffer for lack of medical care, as the British "Tommies" suffered in the first Mesopotamian campaign which ended so unhappily at Kut-El-Amara. Our soldiers are the best-bodied, the most intelligent and to us the dearest of all those "carrying on" in the hell of Flanders Field and Picardy, and they are going to have the best medical service in the world, if the physicians of America do not their bit, but their best.

A CASE OF POTT'S PARAPLEGIA RELIEVED BY A SPINAL BONE GRAFT.*

By Roland Hammond, M. D.,
Providence, R. I.

This patient was operated upon at a clinical meeting of this Society held at the Rhode Island Hospital, September 6, 1917, and is here shown in order that the end result may be noted.

W. W., age 32, was admitted to the Rhode Island Hospital March 14, 1917, complaining of difficulty in walking and coldness and numbness of the feet.

P.T. About ten months ago patient noticed that his feet felt extremely cold. Sensation was present, but there was numbness, extending at times up to the knees. He could walk only with a sliding motion and the use of a cane. On one occasion he slipped from a step and fell. No pain at any time.

P.E. negative except for the following:

Back: A slight hyphos in the upper dorsal region, most marked at the fifth thoracic vertebra.

Reflexes: Knee jerks hyperactive. Positive ankle clonus on both sides. No Babinski. No Kernig.

Chest (examination by Dr. Jay Perkins, March 28, 1917): "Dullness at both apices, much more marked on the left. Harsh breathing, increased voice sounds and rales over the entire upper left lobe."

---

*Read before the Rhode Island Medical Society, June 6, 1918

Roentgenographic examination: Both antero-posterior and lateral views show diseased condition and fusion of the fifth, sixth and seventh thoracic vertebrae with practical obliteration of the intervertebral spaces between them. The sixth vertebra is almost entirely absorbed. A para-vertebral abscess, secondary to the Pott's disease, is also present.

Treatment: Patient placed on a gas pipe frame, and extension with ten pounds pull applied to each leg. This treatment was continued with some increase of weight for nearly six months without appreciable relief. During this period the patient was annoyed by frequent powerful contractures of the hamstring muscles. Feeling that the conservative treatment of Pott's paraplegia had received a sufficient trial, I suggested the spinal bone graft operation to the patient, but told him that I was not all sure of its being successful. He requested that the operation be performed.

On the morning of the operation the chest was again examined by Dr. Jay Perkins with reference to the choice of a proper anesthetic. "Percussion note dull over entire left front. Both apices involved. Many rales at both apices and over the left front thought to be pleural rales. Patient thought to have an arrested, extensive pulmonary tuberculosis. Gas-oxygen recommended for operation, but ether not contraindicated."

September 6, 1917. Operation: Transplantation of Tibial Graft into the Spinous Processes. (Albee Technic.)

A curved incision about seven inches long with the convexity to the right of the median line was made, beginning at the level of the third thoracic vertebra and extending to the ninth thoracic vertebra. The spinous processes were exposed by dissection. With a wide Albee osteotome and mallet the spinous processes from the fourth to the ninth thoracic vertebrae were split longitudinally slightly to one side of the median line, so that a V-shaped groove was formed. A silver probe was bent to conform to the contour of the groove to be used as a pattern in cutting the graft from the tibia. Strips of gauze moistened with saline were packed into the groove to control hemorrhage. The incision was covered with hot towels.

A curved incision almost eight inches long was then made on the anterior surface of the left lower leg, and the tibia exposed. The silver probe previously bent to conform to the contour of the groove in the spinous processes was laid on the surface of the tibia, and the pattern of the graft marked out with a knife. With a motor saw having twin saws set about one-half inch apart, a curved piece of bone six inches long and nearly one-half inch wide was cut from the antero-internal surface of the tibia, according to the pattern previously made. The graft was wrapped in a warm saline towel and carefully preserved. The skin incision in the leg was closed with a continuous lock-stitch suture of plain catgut. Sterile dressing applied.

The graft was placed in the groove fashioned in the spinous processes, and held in place by three sutures of heavy chromic gut, which were passed through the periosteum of the two sides of the groove and over the graft. As the sutures were tightened, the graft was pressed down securely into the groove. The fascia of the back was closed over the graft with a continuous suture of chromic gut, and the skin with a continuous lock-stitch suture of plain catgut. Sterile dressing applied, and over this many layers of cotton held in place with strips of adhesive plaster. The entire dressing was held in position by a tight arm-hole binder.

Post-operative recovery uneventful.

About a week after the operation the contractures of the hamstring muscles began to be noticeable again.

In late October he complained that his legs were drawing up again, and on November 4 extensions were applied to both legs. The condition continued unchanged for three months when the extensions were removed, and the legs then showed no further tendency to draw up.

By the middle of February the patient was able to walk about the ward for two or three hours at a time.

On March 26, 1918, patient was discharged from the hospital, walking and in excellent condition save for a slight staggering gait at times.

About the middle of May he went to work in a garage, and was exhibited at the June meeting of the Rhode Island Medical Society. He is now walking five to six miles a day, has been at work for two weeks and appears in excellent health and spirits. A slight staggering in the gait persisted.

In view of the fact that conservative treatment had been tried for nearly six months with no

improvement, it seems reasonable to attribute the relief obtained in this case to the operative procedure. The graft undoubtedly stiffened the vertebral column at its weak point, and allowed the congestion in the investing membranes of the spinal cord to be absorbed with consequent relief of pressure.

SEMINAL VESICULITIS.

By Dr. H. Terry.

Inflamed prostate and seminal vesicles are usually due to gonorrhoea, and one or the other or both seem to be involved if the disease is long continued.

My records in the last six months show several who have never had gonorrhoea, but have been relieved of various symptoms by treating the seminal vesicles, and the case-histories of those most evident may be of interest. I believe the prostate has been unduly credited for much of our business, and I should like to include one case, though treated a year ago, because prostatitis may be ruled out, the prostate having been removed nine years before by Dr. Sanford S. Burton.

This man, sixty-three years old, complained of pain over the bladder, of not urinating freely, considerable frequency both day and night and a curious pain in one foot relieved by urinating. The urine contained considerable pus, the bladder held but four ounces and there was about three-quarters of an ounce residual urine. The fluid expressed from the vesicles seemed to be nothing but pus. Nine days later he was very much better and in a month was symptomatically well. In answer to a letter, he wrote me June 6, 1918: "I have had no trouble since you sent me away on a vacation about a year ago and I am feeling fine."

December 15, 1917, an apothecary, twenty-five years old, married, complained of having to pass water frequently for two weeks. He had been taking urotropin and compound salol capsules, but was getting worse. All three glasses were opaque from pus and contained numerous bacilli and many cocci in groups. The prostate felt normal, but the vesicles were large and soft and much pus could be expressed. Six days later he was feeling much better. The first glass was still cloudy, but the second and third were quite clear. After five days more he felt well and the urine was quite clear with a few shreds in the first glass. January 4, 1918, i. e., twenty days after beginning treatment, he seemed to be well and the urine was clear.

January 11, 1918, a file-cutter, twenty-eight years old, single, complained of pain over the bladder for nine months or more and considerable frequency, although he could hold his water a reasonable time if obliged to. The first glass contained short shreds made up of pus, small epithelial cells with large nuclei and short rod-shaped bacteria. The seminal vesicles were palpable and pus, but no bacteria was found in the expressed fluid. Although relieved of his frequency quite quickly and of his pain to a great extent, he did not get well. At the end of a month the meatus which would admit 23 F. was enlarged so as to admit a urethroscope. In the posterior urethra there were found cords stretching backward from the veru-montanum toward the bladder, appearing like a small trabeculated bladder, and there was quite a patch of what appeared to be "granulation tissue" to the right and distal to the veru-montanum. Applications were made through the urethroscope in addition to the treatment of the vesicles, and March 18, 1918, he seemed to be well.

March 12, 1918, a machinist, forty-one years old, single, complained of "inflammation of the bladder" for five weeks, gradually getting worse. He was urinating about once in two hours day and night, with pain and tenesmus. The urine was opaque from pus and during the last week had contained blood. The fluid expressed from the vesicles contained pus and cocci in chains. This inflammation of the bladder came about a week after tonsillitis. Ten years before he had had an attack of acute nephritis after a tonsillitis. Four days after his first visit he reported that he felt well, that the night before he had slept all night and in the daytime noticed some urgency only when the bladder was full. Five days after this, that is, nine days after his first visit, he considered himself well and the urine was clear except for a few shreds in the first glass.

About the first of March a physician, forty-five years old and single, reported that he found albumen and casts in his urine. He was led to examine the urine because for a time he had been getting up once or twice at night and in the daytime had had some frequency. The urine was clear, contained a large trace of albumen and hyaline casts. The specific gravity was 1020 and the systolic blood pressure 140 m.m. The prostate felt normal, the vesicles were palpable and pus with baccilli of the colon type were expressed. Five days later he reported that he had not been obliged to get up at night since his first visit. The urine was not examined. Four days from this time he considered himself well and there was neither albumen nor casts in the urine. The doctor's gall-bladder was opened a short time before this attack, and there was much suppuration following the operation. The nocturnal urination returned after a few weeks, and though promptly relieved, treatment was continued until about June 1, 1918. At that time, as he was feeling well, he wanted to know

Concluded on page 148

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

ROLAND HAMMOND, M.D., *Editor*
249 Thayer Street, Providence, R. I.

J. F. HAWKINS, M.D.
Business Manager
114 Westminster Street
Providence, R. I.

ALEX M. BURGESS, M.D.
JOHN E. DONLEY, M.D.
J. W. LEECH, M.D.
F. T. ROGERS, M.D.
} *Associate Editors*

Committee on Publication: ROLAND HAMMOND, M.D., *Chairman*; F. T. ROGERS, M.D.; W. A. RISK, M.D.; GARDNER T. SWARTS, M.D.; J W. LEECH, M.D.

Editorial Correspondence, Books for Review and Exchanges should be addressed to the Editor; Advertising Correspondence to the Business Manager.

Advertising matter must be received by the 15th of the month preceding date of issue.

Advertising rates furnished upon application, to the business manager, J. F. Hawkins, M.D., 114 Westminster Street, Providence, R. I.

SUBSCRIPTION PRICE, $2.00 PER ANNUM. SINGLE COPIES, 25 CENTS.
Entered at Providence, R. I. Post Office as Second-class Matter.

RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

GARDNER T. SWARTS	*President*	Providence
JOHN M. PETERS	*1st Vice-President*	Providence
JESSE E. MOWRY	*2d Vice-President*	Providence
JAMES W. LEECH	*Secretary*	Providence
W. A. RISK	*Treasurer*	Providence

DISTRICT SOCIETIES

KENT
Meets the second Thursday in each month

H. BARTON BRYER	*President*	Natick
JAMES M. BODWELL	*Secretary*	Phenix

NEWPORT
Meets the third Thursday in each month

EDWARD V. MURPHY	*President*	Newport
A. CHACE SANFORD	*Secretary*	Newport

PAWTUCKET
Meets the third Thursday in each month excepting July and August

ARTHUR H. MERDINYAN	*President*	Central Falls
CONRAD E. THIBODEAU	*Secretary*	Pawtucket

PROVIDENCE
Meets the first Monday in each month excepting July, August and September

WILLIAM F. FLANAGAN	*President*	Providence
CHARLES O. COOKE	*Secretary*	Providence

WASHINGTON
Meets the second Thursday in January, April, July and October

A. B. BRIGGS	*President*	Ashaway
W. A. HILLARD	*Secretary*	Westerly

WOONSOCKET
Meets the second Thursday in each month excepting July and August

EDWARD L. MYERS	*President*	Woonsocket
E. F. HAMLIN	*Secretary*	Slatersville

Section on Surgery—2d Wednesday in each month, Dr. F. G. Phillips, Chairman Dr. Peter P. Chase, Secretary and Treasurer.

Section on Diseases of Children—3d Tuesday in each month, Dr. Henry E. Utter, Chairman; Dr. J. S. Kelley, Secretary and Treasurer.

Section on Gynecology and Obstetrics—3d Wednesday in each month, Dr. C. W. Higgins, Chairman; Dr. E. S. Brackett, Secretary and Treasurer,

Section on Medicine—4th Tuesday in each month, Dr. D. Frank Gray, Chairman; Dr. C. W. Skelton, Secretary and Treasurer

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President, Dr. Harlan P. Abbott, President; Dr. C. J. Astle, Secretary-Treasurer.

EDITORIALS

HISTORICAL AND APOLOGETIC.

When the need of a Medical Journal to record the transactions of the Providence Medical Association, and to retain for future generations the work and thought of earlier members of the profession, was urged, a doubting fellow of the Association moved and, in spirit of jest, it was voted that the Association publish in a Journal its transactions and the original papers read before it, provided it be done without expense to the Association.

The committee accepted the dare, formed and published *The Providence Medical Journal* as the official organ of the Association, and turned into the treasury, at the end of the year, more than two hundred dollars as the result of the venture. Under varying vicissitudes, and many managers, its publication has been continuous, it has at times been able to contribute to the Society's funds, it has never cost the Association a penny, and it has ever been a faithful and valuable asset. When it became the organ of the State Society, it was hoped that the change was permanent, but the war has presented new problems. The Editor, the Business Manager and the mem-

bers of the Publication Committee are in the service. The large number of the members of the State and District Societies who have patriotically given to the Government their services has depleted the active membership. There will be a lessening of the papers presented before Societies and a lack of material for future issues of the JOURNAL.

It seems wise, therefore, to discontinue the publication of THE RHODE ISLAND MEDICAL JOURNAL for the duration of the war, and this number will be the last. When the war is over—when the Hun has gotten his just dues, and our brave fellows have returned to their homes, and life is again normal,—THE RHODE ISLAND MEDICAL JOURNAL, rejuvenated, will again represent the medical profession of this State. God grant that it may be soon.

MILITARY AND CIVIL HOSPITALS.

The civilian doctor, who has but recently taken up military work, finds much to praise and but little to criticize in the conduct of the military hospital. His first impression is that of efficiency. Red tape has found some justification for its existence. There seem at first to be an interminable number of papers to be signed, and formalities to be gone through with. He soon observes, however, that these very procedures serve to grease the wheels and the end result is accomplished with much less friction than in the average civil hospital. He may smile indulgently when the personnel office holds him up on a diagnosis which must be made to conform to the departmental classification, but second thought compels him to admit that this arbitrary classification by its uniformity provides a workable system which is intelligible at all times and in all places. In his own civil clinic he might have used a diagnosis which would have caused confusion in hospital records.

The ability to study cases from their incipiency through their entire course is an advantage which the military doctor enjoys, and which is denied to his civil confrere. The great progress made during the past winter in the study of the several types of pneumonia occurring in the various cantonments is a single notable example. The opportunity for careful clinical study, combined with frequent roentgenological and cytological examinations, has been utilized to the best advantage by the prominent clinicians at these camps. The result has been that our knowledge of this disease has greatly developed and the treatment has correspondingly improved. The happy combination of military discipline and unlimited resources explains the results in these instances.

The civilian entering the Medical Corps is struck with the high order of intelligence and ability possessed by the average hospital apprentice or orderly. His training has been such that he may be depended upon to make routine laboratory examinations and to do the simpler dressings with the assurance that they will be carefully performed. He likewise becomes a capable assistant at operations and in many cases a skilled anesthetist.

One is also favorably impressed with the all round abilities of the regular in the Medical Corps. The chances for specialization in the service are few. He must be a man of versatility and know something of everything, for his orders may take him at any moment to some distant post where he may be called upon for almost any kind of duty. In addition to the capabilities of a good general practitioner he must be a surgeon of average ability. He must be up in paper work; he must understand the inspection of food supplies, and he must enforce discipline, mete out punishment and grant clemency with an impartial hand. These multifarious duties call for a rare combination of talents, and naturally the proper mixture is obtained no oftener in military than in civil life. The wonder is that it is so often found. We have come to have a better understanding of the problems which confront our military brother, and we believe that that part of the profession now in service has learned from him a wholesome lesson. We trust that the experience has been mutual, and that after the war the regular Medical Corps of both the Army and Navy will continue on their present high plane.

THE VOLUNTEER MEDICAL SERVICE CORPS.

Every physician in Rhode Island is called upon to do his or her share toward winning the war, according to his or her abilities and circumstances. And with the formation of the Volunteer Medical Service Corps of the United States,

the valuable services of the physicians ineligible to the Medical Reserve Corps can be utilized in some way or other.

There are but five reasons for a man not enlisting in the Medical Reserve Corps, i. e., physical disability, over age (55), dependents, essential public need, or institutional need. The question of joining the active medical forces of the Army or Navy is one which must be decided each for himself, honestly and fearlessly. If a man cannot conscientiously place himself in one of the above five classes, he should apply for a commission. He is a slacker if he does not. Those men and physicians who by the same test are not eligible for a commission, and women physicians, should not neglect the opportunity of joining the Volunteer Medical Service Corps.

The rules of the organization, as put out by the Medical Section Council of National Defense, are as follows:

I. *Name.*—The name of the organization shall be the Volunteer Medical Service Corps of the United States.

II. *Object.*—(1) The object of the Corps shall be to establish an emergency medical organization to perform, when required, such civic and military duties as are not provided for.

(2) Services of members will be called for and rendered in response to requests to a Central Governing Board from the Surgeon General of the Army, the Surgeon General of the Navy, the Surgeon General of the Public Health Service, the General Medical Board of the Council of National Defense, or from other duly authorized departments or associations.

III. *The Corps.*—The Corps shall consist of all members of the organization. The general management of the Corps shall be vested in a Central Governing Board.

IV. *Central Governing Board.*—The Central Governing Board shall be a committee of the General Medical Board, Council of National Defense.

V. *Officers.*—The officers of the Corps shall be a president, a vice-president, and a secretary, and shall be appointed from among the members of the Central Governing Board. These officers shall constitute the executive committee of the Central Governing Board, and shall direct the activities of the Corps.

VI. *State Governing Boards.*—(1) The State Governing Boards shall consist of the members of the State Committees, Medical Section, Council of National Defense. The State Committees shall select, subject to the approval of the Central Governing Board, five of their members who are eligible for election in this Corps to act as the executive committee of the Volunteer Medical Service Corps in the respective States.

(2) The duties of the executive committee of the State Governing Board shall be to consider applications for membership in the Corps from the respective States and to submit recommendations regarding these applications to the Central Governing Board.

(3) The State Governing Board shall aid in the work of the executive committee and perform such other duties as may hereafter be deemed essential by the Central Governing Board to accomplish the purpose for which the Corps was created.

VII. *Membership.*—(1) Such physicians shall be eligible for membership in this Corps as would be accepted in the Medical Reserve Corps were it not for—

(a) Physical disability.
(b) Over age (55).
(c) Essential public need.
(d) Essential institutional need.
(e) Dependents.

(2) Women physicians are eligible.

(3) Application for membership in the Volunteer Medical Service Corps shall be made upon blanks furnished for that purpose by the Central Governing Board. The completed form shall be returned to the Central Governing Board for proper classification according to training and special fitness.

VIII. *Method of Election.*—(1) The members of the Corps shall be graduates in medicine who are licensed to practice medicine in their respective States, who have made application for membership, who meet the qualification requirements that are now or shall from time to time be established by the Central Governing Board, and who shall be elected to membership by the Central Governing Board.

(2) Each physician elected to membership in the Corps shall be designated as a member of the Volunteer Medical Service Corps.

(3) It shall be the duty of each member of the Volunteer Medical Service Corps to notify the Central Governing Board when eligibility to the Corps ceases to exist.

IX. *Insignia.*—(1) Members of the Corps shall be authorized and encouraged to wear the insignia of the Corps.

(2) The insignia may be secured by members of the Corps under such regulations as may be determined upon by the Central Governing Board.

(3) The insignia shall not be loaned to any person not a member of the Corps, nor shall it be worn after notification that eligibility to the Volunteer Medical Service Corps has ceased to exist.

X. Any member of the Corps may be expelled for conduct which, in the opinion of the Central Governing Board, is derogatory to the dignity of the Corps or inconsistent with its purposes.

XI. *Authorization.*—The organization and insignia have been authorized by the Council of National Defense.

SOCIETIES

RHODE ISLAND MEDICAL SOCIETY

HOUSE OF DELEGATES.
SPECIAL MEETING.

July 30, 1918.

A special meeting of the House of Delegates is held this date, the President, Dr. G. T. Swarts, presiding. The Treasurer, Dr. W. A. Risk, having been called to active duty in the Medical Reserve Corps, it is necessary to elect a Treasurer pro tem. On motion of Dr. Mowry, seconded by Dr. Mitchell, Dr. F. T. Rogers was elected Treasurer pro tem. Adjourned.

J. W. LEECH, *Secretary.*

MISCELLANEOUS

RHODE ISLAND HOSPITAL.

Norman C. Baker, M. D., Second Assistant Superintendent for the past eight years, has received a captain's commission, M. R. C., and has been ordered to report for duty at Fort Oglethorpe, Georgia, August 24, 1918.

Elmer F. Learned, M. D., whose internship was to have ended October 1, 1918, has been ordered to go to Fort Slocum for limited service.

Henry R. Brown, M. D., whose internship began April 1, 1918, has recently been given a lieutenant's commission (Junior Grade), N. R. C., and ordered out for duty.

Dr. A. T. Jackson entered upon his duties as Third Assistant Superintendent July 1, 1918.

Captains W. A. Risk, M. R. C., and John Champlin, M. R. C., have reported for duty at Camp Devens, Mass.

Dr. F. T. Fulton is also at Camp Devens on a contract service in cardiac work.

Dr. W. B. Cutts has received a captain's commission and is on duty at Fort McHenry, General Hospital, Baltimore, Md.

HONOR ROLL

Capt. Norman C. Baker, M. R. C., U. S. A.
Lieut. Fred A. Coughlin, M. R. C., U. S. A.

MEDICAL SECTION, COUNCIL OF NATIONAL DEFENSE.

INFORMATION ON THE VOLUNTEER MEDICAL SERVICE CORPS.

1. How should I apply for membership?

Write to the Medical Section, Council of National Defense, and application blanks and circulars of information will be sent. When received, fill out the application form in full, being guided by instructions contained in the Rules of Organization and the circulars of information.

2. What shall I do with application form when completed?

Forward to the Medical Section, Council of National Defense, Washington, D. C.

3. What is to be gained by the creation of this organization?

A classification as to the availability of all physicians not eligible for military service.

4. What is meant by classification?

Our record of information furnished by the physician himself so that, if the future demands, each one could be used to the best advantage.

5. What is meant by availability for service?

Information of record so as to determine where, when and how physicians can be requested to render service.

6. Who are eligible?

All physicians who would be accepted by the Medical Reserve Corps were it not for physical disability, over age (55), essential public need (boards of health and the medical care of isolated communities), essential institutional need (medical schools and hospitals), or dependents. Women physicians are eligible.

7. How will eligibility to this Corps be determined?

Information obtained from application blanks, three personal references, and the Executive

Committee in your State will be considered by the Central Governing Board, which shall determine final action.

8. How do I become a member of this Corps?

By vote of the Central Governing Board.

9. How will physical disability be determined?

If you have applied for a commission in the Medical Reserve Corps and are rejected because of physical disability that information will be of record. If a physical disability is obvious, a statement by the Executive Committee to that effect is all that is necessary; otherwise apply for commission in the Medical Reserve Corps, and if rejected physically, that rejection will be of record in this office.

10. Does membership in the Corps carry with it rank and pay?

This Corps is not authorized to give rank. Arrangements shall be made between a member and the agency REQUESTING service. The question of compensation and place of service, whether with or without rank, must be determined at that time.

11. Can any member of this Corps be ordered to active duty?

No member will be ORDERED to render any service. Requests to accept service according to qualifications and availability will be made, such service to interfere as little as possible with already existing duties.

12. What will be the probable character of this service?

Question 22 of the application blank is as follows:

Are you available for any of the following services:

a. Consultant—Medical service, surgical service, public health service, special service—what?

b. Institutional—Laboratory, administrative, medical service, surgical service, special service—what?

c. Local or medical advisory boards.

d. Reclamation of registrants rejected for physical unfitness.

e. Services to needy families and dependents of enlisted men.

f. Sanitation.

g. Miscellaneous service.

13. Can I be admitted to the Medical Reserve Corps if I become eligible after election in the Volunteer Medical Service Corps?

Yes, but notify the Central Governing Board that you have accepted a commission in the Medical Reserve Corps.

14. How is essential, public or institutional need determined?

By the Central Governing Board, which will be guided by information obtained from application blanks, personal references, Executive Committee of the State, Surgeon General's office, and officials of colleges, hospitals, boards of health and community.

15. How is eligibility of physicians because of dependents determined?

By the Central Governing Board, being guided by information secured.

16. Do I receive insignia to show membership in this Corps?

A small badge has been authorized by the Council of National Defense. This will be issued to each member of the Corps.

Concluded from page 143

when he should be considered cured. Pus but no bacteria was found in the fluid expressed from the vesicles. Treatment has since been omitted. As a corollary to this case the doctor reports that a man complained to him of "inflammation of the bladder," and, though a year ago he might have given him "cystitis tablets No. 2" or something else, that instead, he massaged the prostate, and that the man reported the next day "the best night in three months."

June 14, 1918, a clerk, twenty-one years old, complained of impotency. He had always been in the best of health, and though masturbating some between fifteen and nineteen years of age had not done so immoderately. The prostate seemed normal, but both vesicles were large and tender. Pus, small epithelia with large nuclei and a few colon baccilli were expressed. No spermatozoa were present in the expressed fluid. The urine was of low specific gravity, 1005, and contained some floating particles made up of pus and small epithelia. I think the prognosis is good.

These are by no means all the symptoms that may apparently be due to infected vesicles, such as a free urethral discharge distinguished from gonorrhoea only by the microscope; pains in joints, muscles and fashia; pain over the region of the appendix and also over a corresponding region on the left side, relieved by pressure; pain over the kidneys and along the ureters, simulating renal colic; more or less mental depression, and still more.

I have not reported any case where there was a history of gonorrhoea, however remote, and of especial interest is the one so closely following a tonsillitis and showing streptococci and the one soon after a gall-bladder operation and showing colon baccilli.

The treatment was essentially stripping the seminal vesicles.

It used to be said, good-naturedly, of the late Dr. George W. Porter, who introduced gynecology as a specialty into Rhode Island, that if a man should seek his advice the doctor would find some trouble with the man's womb.

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society. Issued Monthly

VOLUME II
NUMBER 3
Whole No. 117

PROVIDENCE, R. I., MARCH, 1918

PER YEAR $2.00
SINGLE COPY 25 CENTS

CONTENTS

ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I., UNDER ACT OF MARCH 3, 1879

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society. Issued Monthly

VOLUME II
NUMBER 4
Whole No. 118

PROVIDENCE, R. I., APRIL, 1918

PER YEAR $2.00
SINGLE COPY 25 CENTS

CONTENTS

ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I., UNDER ACT OF MARCH 3, 1879

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society. Issued Monthly

VOLUME II
NUMBER 5
Whole No. 119

PROVIDENCE, R. I., MAY, 1918

PER YEAR $2.00
SINGLE COPY 25 CENTS

CONTENTS

ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I., UNDER ACT OF MARCH 3, 1879

Let Your Choice be Chlorazene

Chlorazene, Dakin's powerful synthetic antiseptic, may be used in twice the strength of sodium hypochlorite solutions without irritation.

Chlorazene is more stable and convenient than hypochlorite solutions.

Chlorazene, when tested on staphylococcus aureus in blood serum and muscle extract has been found more powerful in germicidal activity than the usual wound concentrations of phenol, iodoform, compound solution of creosol, hydrogen peroxide, the silver salts, iodine or bichloride of mercury. (See Dakin & Dunham's Handbook of Antiseptics, pp. 84-88.)

Chlorazene is non-toxic and does not coagulate the albumen of the tissues.

Chlorazene may be used in all pus infections, in surgery, dentistry and general practice. Let Chlorazene be your first thought wherever and whenever an antiseptic is to be used.

Packages and Prices of Chlorazene Products

Chlorazene Tablets: 100, $0.65; 500, $2.60; 1000, $5.00. Chlorazene Powder: Hospital Package No. 1, $0.60; No. 2, $2.25. Chlorazene Surgical Cream (containing 1% Chlorazene): jars, $0.65; collapsible tubes, $0.60. Chlorazene Surgical Powder (containing 1% Chlorazene): sifter top cans, $0.35. *In Canada add customs' tariff to prices quoted.*

If your druggist cannot supply you with Chlorazene Products send your order direct to our home office or nearest branch point. We are headquarters for the Dakin products, Chlorazene, Dichloramine-T, Chlorcosane and Halazone.

Send for Trial Tube of Chlorazene Tablets and New Chlorazene Booklet

THE ABBOTT LABORATORIES

Home Office and Laboratories, Dept. 78, CHICAGO

New York **Seattle** **San Francisco** **Los Angeles** **Toronto** **Bombay**

RECONSTRUCTION

Spring is nature's period of reconstruction, "when the world is made anew." Then is when the Call of the Open comes strongest to every shut-in, the invalid or the cripple. With the aid of an invalid chair or the proper orthopedic appliance, nature will supplement the physician's efforts.

Orthopedic Apparatus

Orthopedic apparatus, representing the latest scientific ideas, is manufactured by us to meet the special conditions of each individual case. A thoroughly organized department, with years of experience in the production of these special appliances, is ready to co-operate with the physician in the selection and designing of appliances for every case. We issue a complete catalog of standard appliances and this catalog will be sent free if desired.

Invalid Rolling Chairs

A complete line of invalid chairs, meeting every condition, is manufactured by us and sold direct to the physician at manufacturer's prices. A substantial saving in price is secured through this direct selling policy, while the quality and designs of the chairs are of the highest. Our complete invalid chair catalog will be gladly sent upon request.

The prices are attractively low—The quality is uniformly high.

FRANK S. BETZ COMPANY, Hammond, Ind. **Chicago Salesroom 30 East Randolph St.**

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society. Issued Monthly

VOLUME II
NUMBER 6
Whole No. 120

PROVIDENCE, R. I., JUNE, 1918

PER YEAR $2.00
SINGLE COPY 25 CENTS

CONTENTS

ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I., UNDER ACT OF MARCH 3, 1879

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society. Issued Monthly

VOLUME II
NUMBER 7
Whole No. 121

PROVIDENCE, R. I., JULY, 1918

PER YEAR $2.00
SINGLE COPY 25 CENTS

CONTENTS

ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I., UNDER ACT OF MARCH 3, 1879

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society. Issued Monthly

VOLUME II
NUMBER 8. } Whole No. 122 PROVIDENCE, R. I., AUGUST, 1918 PER YEAR $2.00
SINGLE COPY 25 CENTS

CONTENTS

ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I., UNDER ACT OF MARCH 3, 1879

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society. Issued Monthly

VOLUME II NUMBER 9 } Whole No. 123 PROVIDENCE, R. I., SEPTEMBER, 1918 PER YEAR $2.00 SINGLE COPY 25 CENTS

CONTENTS

ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I., UNDER ACT OF MARCH 3, 1879